The Journal of the American Medical Association

Published Under the Auspices of the Board of Trustees

VOL. 131, No. 16 — CHICAGO, ILLINOIS — AUGUST 17, 1946

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PENICILLIN IN THE TREATMENT OF NEUROSYPHILIS

II. Dementia Paralytica

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A study of the effects of penicillin in various forms of neurosyphilis was begun at the Johns Hopkins Hospital in October 1943. The results of the first two years' experience are being reported in a series of papers. The first of these [1] dealt with asymptomatic neurosyphilis. This, the second, is concerned with the treatment of dementia paralytica.

As of December 1945, 41 patients with dementia paralytica have been treated with penicillin. Twenty-four of these patients (group A) received penicillin alone in amounts ranging from 2.0 to 10.0 million units in divided doses; the remaining 17 patients (group B) received from 2.0 to 4.28 million units of penicillin in divided doses concurrently with induced tertian malaria. An effort will be made to compare the results of treatment with penicillin alone with those of penicillin plus malarial therapy.

The results which are presented in this paper must be interpreted not only in the light of the small number of cases reported but also with due regard to the fact that from June 1943, the date of inception of the study, to the present, commercial penicillin has been a changing mixture of various substances. The content of "impurities" has gradually decreased as potency in terms of units per milligram has increased. The relative amounts of the several identified penicillin fractions G, F, X and K have likewise varied from time to time. These two changes, and perhaps others, suggest that therapeutic efficacy may not have remained constant and that it may be significantly different today from what it was originally. It is not now possible to assess the extent to which these changes may have affected the results here reported.

The sodium salt of commercial penicillin was used throughout. The preparations used were those of several manufacturers and of many lot numbers. The composition in terms of the now identified penicillin fractions G, F, X and K is unknown. Aqueous solutions were injected intramuscularly every three hours, day and night. Individual doses ranged from 40,000 units to 50,000 units, the total number of injections from fifty to two hundred. Intrathecal therapy was not employed. Those treated with malaria inoculata were allowed to have from eight to twelve paroxysms and approximately forty hours of fever in excess of 104 F. Penicillin was usually begun at the time of the first apparent malarial fever.

GROUP A. PATIENTS TREATED WITH PENICILLIN ALONE

1. *Case Material.*—Twenty-four patients with dementia paralytica have been treated with penicillin alone. The average age of these patients was 40 years, the youngest being 13, the eldest 68. Seventeen of the 24 patients (71 per cent) were between the ages of 30 and 50 years. The race and sex distribution is shown in table 1.

The majority had psychoses of simple dementing type, although all of the major paretic psychoses were represented in the group. The type of psychosis present on admission is shown in table 2.

Eighteen patients (75 per cent) had had a comparatively recent onset of symptoms, i. e. under one year. Six (25 per cent) had had symptoms for one year or more.

Eleven had received some previous antisyphilitic therapy: 3 malaria plus chemotherapy, 8 chemotherapy alone. In no case had malarial therapy been given within a year prior to the institution of penicillin treatment. In only the 3 receiving therapeutic malaria had any improvement from this therapy been apparent, and this improvement had been minimal.

Sixteen patients have been followed for more than one year; 4 for two years after penicillin therapy.

2. *Effects of Therapy.*—(*a*) Herxheimer Effect: Nineteen of the 24 patients had febrile Herxheimer reactions, with an average rise in temperature to 101.3 F. The maximum temperature observed was 103.2 F. An unexplained observation is the fact that 4 of the 5 patients who showed no reactive hyperpyrexia had had no previous chemotherapy.

(*b*) Effect on Somatic Signs: Repeated observations were made on the effect of penicillin therapy on the body weight, speech, tremor and the patient's handwriting. As a group, 50 per cent showed improvement in these somatic signs. Increase in body weight and diminution in tremor seemed somewhat more definite than improvement in speech defects and facility of handwriting. The mean change in body weight was +9.2 pounds (4.2 Kg.).

(*c*) Effect on the Paretic Psychosis: As judged by the most recently recorded observations, 11 of the 24 patients (46 per cent) were objectively improved in their mental status. One had a complete remission, 8 showed moderate improvement and 2 slight improve-

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This work was done under a contract recommended by the Committee on Medical Research between the Office of Scientific Research and Development and the Johns Hopkins University; and under a grant-in-aid to the Johns Hopkins University from the United States Public Health Service, National Institute of Health, Syphilis Study Section.

1. Mohr, C. F., and Moore, J. E.: Penicillin in the Treatment of Neurosyphilis: I. Asymptomatic Neurosyphilis, Am. J. Syph., Gonor. & Ven. Dis., to be published.

ment. Seven were essentially unchanged and 6 were worse (table 3).

Following penicillin therapy, a change in the type of psychosis was observed in 4 patients: 1, originally classified as simple demented, became manic, 1 patient with paranoia developed evidences of deterioration and 2 patients with dementia developed paranoid trends.

TABLE 1.—*Race and Sex Distribution of Twenty-Four Patients with Dementia Paralytica Treated with Penicillin Alone*

	White	Negro	Total
Male	9	11	20
Female	3	1	4
Total	12	12	24

(*d*) Effect on the Abnormalities in the Cerebrospinal Fluid (chart 1):

(1) Cell count and total protein. Following penicillin treatment, the pleocytosis of the spinal fluid almost invariably disappeared. This was a prompt and, during the period of observation, generally a well sustained effect.

A similarly favorable and almost as prompt effect on the total proteins of the cerebrospinal fluid was apparent.

Applying the Dattner-Thomas [2] concept of "activity" as judged by increased cell count and total proteins, there were 3 patients with evidence of an active process in the central nervous system six months after treatment:

CASE 1.—A Negro aged 27, whose symptoms of dementia paralytica (convulsions, irrational behavior and disorientation) were of six months' duration, had a strongly positive spinal fluid, with 500 lymphocytes, 77 mg. per hundred cubic centimeters total protein, a colloidal mastic test reading 5554330000 and a positive Wassermann reaction with as little as 0.01 cc. of spinal fluid. He showed no clinical response to therapy with 4.0 million units of penicillin, although the cell count was reduced to 13 and the spinal fluid proteins to 37 mg. on the thirteeenth day after treatment. He was transferred directly to the Crownsville State Hospital. Follow-up studies there have indicated gradual and well sustained improvement in the spinal fluid Wassermann titer and in the results of the colloidal mastic test. Fifty-five weeks after treatment, however, there were 10 cells and a total protein of 40 mg. in the cerebrospinal fluid. He had, moreover, "gone downhill physically, has epileptiform seizures and at one time was in a very grave state following a series of these seizures. He is bedridden at the present time and seems to be deteriorating mentally rather rapidly."

TABLE 2.—*Type of Paretic Psychosis Present on Admission Among Twenty-Four Patients Treated with Penicillin Alone*

Simple dementia	15
Dementia with depression	1
Dementia with mania	1
Manic-expansive	2
Paranoid	1
Simple depressed	2
Juvenile dementia paralytica	2
Total	24

CASE 2.—A Negro aged 36 was treated for dementia paralytica with 2.4 million units of penicillin in October 1943. His presenting symptoms and signs were those of simple dementia of approximately thirteen months' duration.

A moderate clinical improvement in the paretic psychosis followed, and there was a favorable influence on all the spinal fluid abnormalities.

2. Dattner, B.; Thomas, E. W., and Wexler, G.: The Management of Neurosyphilis, New York, Grune & Stratton, Inc., 1944.

Approximately one year after therapy, however, he developed evidence of a clinical relapse, which was not associated with any increase in the spinal fluid abnormalities. Accordingly, in October 1944 he was treated with quartan malarial therapy, receiving twelve satisfactory paroxysms. Again there was a temporary and partial remission and continued improvement in the cerebrospinal fluid.

In October 1945 he again became worse, and at this time an increased number of lymphocytes (14) in the spinal fluid indicated reactivation of the inflammatory process in the central nervous system. He was again treated with penicillin, this time with 10.0 million units. There was little apparent improvement following this therapy, and when the patient was last examined (December 1945) he was considered to be worse than at the time of the original examination. There had been no significant change in the spinal fluid abnormalities.

CASE 3.—A white man aged 63, whose diagnosis of dementia paralytica was based on nervousness, personality changes, mental deterioration, facial tremor and slurring of speech of approximately ten months' duration, was treated with 4.0 million units of penicillin in January 1944.

Two months later he was greatly improved clinically, although there had been little change in the spinal fluid abnormalities (cell count 17, total protein 67 mg. per hundred cubic centimeters. Four months after treatment, however, he became increasingly excitable and developed a characteristic manic-expansive paretic psychosis. He was retreated with penicillin, again with 4.0 million units. At this time he was manageable only under heavy sedation and, finally was transferred to a state hospital.

In July 1944 the patient had a cerebral vascular accident, developing right sided hemiplegia and aphasia. From this he improved to such an extent that in March 1945 he was treated with malaria and allowed to have seven paroxysms. Following malaria he again improved temporarily but soon again became increasingly deteriorated and progressively more manic.

TABLE 3.—*Results of Treatment with Penicillin Alone on Various Types of Paretic Psychoses*

Type of Psychosis	Complete Remission	Moderate Improvement	Slight Improvement	No Change	Worse	Total
Simple dementia	1	5	1	5	3	15
Dementia with depression	..	..	1	..	..	1
Dementia with mania	..	1	..	..	..	1
Manic-expansive	..	2	..	..	..	2
Paranoid	..	..	..	..	1	1
Simple depressed	..	..	..	..	2	2
Juvenile dementia paralytica	..	..	..	2	..	2
Total	1	8	2	7	6*	24

* One patient died, 4 others admitted to hospitals for the insane.

(2) Colloidal mastic test. In analyzing the results of penicillin on the abnormalities in the colloidal mastic test, an artificial statistical device has been utilized. All 24 patients in this group had, prior to treatment, a "first zone" mastic curve. It was considered that in order to indicate any significant improvement that could be attributed to penicillin therapy there should be decreasing precipitation of the colloidal particles in these lesser dilutions. Therefore only the first three tubes were considered in the statistical analysis. The arithmetical sum of the arbitrarily assigned readings of these first three tubes was chosen. Thus a colloidal mastic of *554*32100 would be recorded as 14, and one of *332*11000 as 8.

It is apparent that penicillin therapy favorably influences the results of the colloidal mastic test. It is also apparent that this effect, while neither as prompt nor, during the periods of observation, as complete as in

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the case of the cell count and total protein, was nonetheless similarly well sustained. There was no case followed for more than one year in which some improvement in the results of this test was not evident.

(3) Spinal Fluid Wassermann Test. Penicillin also was found to lower gradually the average Wassermann titer of the cerebrospinal fluid in this group of 24 patients with dementia paralytica.

The favorable effect, even more than that noted on the results of the colloidal mastic test, was of slow evolution. It was, however, equally well sustained. All patients followed for one year or more had shown some change for the better in the Wassermann titer of the cerebrospinal fluid.

(*e*) Factors Influencing the Results of Treatment with Penicillin: (1) Penicillin dosage. The optimal dosage of penicillin in the treatment of dementia paralytica is not known. None of the patients in this group received more than 10 million units.

A comparison of the results of treatment with less than 5 million with those obtained with between 5 and 10 million units of penicillin shows no significant advantage in using the larger dosages. There was no appreciable difference in the two groups either in respect to degree of clinical improvement or in the rapidity or degree of changes in the spinal fluid abnormalities.

(2) Duration of symptoms. It is suggested by our material that the response to penicillin therapy is better among patients whose symptoms of dementia paralytica are of recent onset. The more acute the onset and the sooner the patient is treated, the better are the results.

It is shown in table 4 that no patient whose symptoms had been present for a year or more prior to the institution of penicillin therapy showed any clinical improvement. The one complete remission occurred in a patient whose symptoms were of four months' duration. Of those moderately improved, the average duration of symptoms was seven months.

The duration of symptoms, however, did not significantly influence the favorable changes in the spinal fluid cell count, total protein or colloidal mastic test. The spinal fluid Wassermann, on the other hand, did become less strongly positive more rapidly and to a more significant degree among patients whose symptoms were of less than one year's duration.

(*f*) Retreatments: Three patients in this group were retreated. Two of them (patients 2 and 3) received additional therapy because of persistent mental abnormalities associated with "active" spinal fluids. The third of these patients (patient 4) had had a favorable spinal fluid response to therapy, but there had been no improvement in his mental status.

CASE 4.—A Negro aged 23, with symptoms of slurring of speech and loss of memory of five weeks' duration was treated with 4.0 million units of penicillin in March 1944.

A favorable spinal fluid response followed this therapy. The cell count and total protein became normal within twenty-one weeks and remained so. The colloidal mastic test and the Wassermann titer improved gradually but consistently.

Objectively, however, he was not improved. He continued to have slurred speech and showed no improvement in mental status. On one occasion he seemed to have developed paranoid trends.

In May 1945 he was therefore retreated with 4.0 million units of penicillin. Two months later he developed lobar pneumonia and was admitted to another hospital. Type VIII pneumococci were isolated and the patient was given a total of 1.88 million units of penicillin. His course was stormy, and for approximately thirty-six hours he had fever of over 103 F. Two months after pneumonia his paretic symptoms were moderately improved. This improvement was temporary, however, and when he was last seen, in November 1945, it was thought that there had been no clinical benefit whatever from therapy.

GROUP B. PATIENTS TREATED WITH PENICILLIN PLUS MALARIAL THERAPY

1. *Case Material.*—Seventeen patients with dementia paralytica have been treated with penicillin plus induced tertian malarial therapy. The average age was 39 years, the youngest being 21, the eldest 60. Ten (59 per cent) were between the ages of 30 and 50 years. The race and sex are shown in table 5. The type of paretic psychosis present on admission is shown in table 6. Four (24 per cent) had had a comparatively recent onset of symptoms, i. e. under one year. Eight (76 per cent) had had symptoms for one year or more. Twelve (70 per cent) had received previous therapy: 3 malaria plus chemotherapy, 7 chemotherapy alone. In only the 3 previously treated with malaria had any improvement been apparent, and this improvement had been minimal. In no case had malaria been given within a year prior to the institution of therapy.

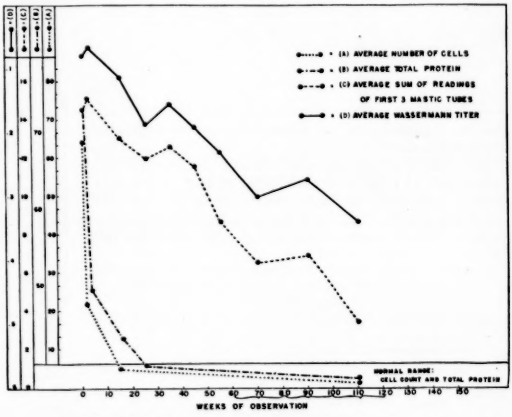
(A) AVERAGE NUMBER OF CELLS
(B) AVERAGE TOTAL PROTEIN
(C) AVERAGE SUM OF READINGS OF FIRST 3 MASTIC TUBES
(D) AVERAGE WASSERMANN TITER
NORMAL RANGE: CELL COUNT AND TOTAL PROTEIN
WEEKS OF OBSERVATION

Chart 1.—Spinal fluid changes following treatment with penicillin alone.

Seven of the patients have been followed for more than one year after combined fever-penicillin; none have been followed for as long as two years.

2. *Effects of Therapy.*—(*a*) Herxheimer Effect: Febrile Herxheimer reactions could not be detected in any of the patients of this group, since the penicillin was given concurrently with malarial therapy.

(*b*) Effect on Somatic Signs: As with the patients in group A, repeated observations were made on the body weight, speech, tremor and the patient's handwriting. In the aggregate, 75 per cent of the patients in this group showed improvement in these somatic signs. The mean change in body weight was + 18.4 pounds (8.4 Kg.).

(*c*) Effect on the Paretic Psychosis: As judged by the most recently recorded observation, at least 10 of the 17 patients (53 per cent) were objectively improved in their mental status. One had a complete remission, 5 showed moderate improvement and 4 slight improvement. Two were essentially unchanged and 2 were worse. Adequate follow-up observations are not available on 3 patients, all of whom live at a considerable distance.

(*d*) Effect on the Abnormalities in the Spinal Fluid (chart 3): (1) Cell count and total protein. Uniformly prompt and well sustained improvement in both the cell count and the total cerebrospinal fluid proteins was evident. There were no cases in which either the cell count or the total protein was abnormal (i. e. no "active" fluids) in excess of twenty weeks after treatment.

(2) Colloidal mastic tests. The effect of penicillin plus malarial therapy on the abnormalities in the colloidal mastic test was uniformly favorable. There was no case observed for as long as twenty weeks in which improvement was not apparent in the first three mastic tubes.

TABLE 4.—*Effect of Duration of Symptoms on the Psychoses of Twenty-Four Patients with Dementia Paralytica Treated with Penicillin*

Duration of Symptoms	Complete Remission	Moderate Improvement	Slight Improvement	No Change	Worse	Total
Under 1 year	1	8	2	2	5	18
1 year or more	..	..	..	5	1	6
Total	1	8	2	7	6	24

TABLE 5.—*Race and Sex Distribution of Seventeen Patients with Dementia Paralytica Treated with Penicillin Plus Malarial Therapy*

	White	Negro	Total
Male	14	0	14
Female	3	0	3
Total	17	0	17

TABLE 6.—*Type of Paretic Psychosis Present on Admission Among Seventeen Patients Treated with Penicillin Plus Malaria*

Simple dementia	9
Manic-expansive	3
Paranoid	0
Depressed	2
Juvenile	3
Total	17

TABLE 7.—*Results of Treatment with Penicillin Plus Malaria on Various Types of Paretic Psychoses*

Type of Psychosis	Complete Remission	Moderate Improvement	Slight Improvement	No Change	Worse	Unknown	Total
Simple dementia	..	2	4	1	1	1	9
Manic-expansive	..	2	..	..	..	1	3
Paranoid	..	..	..	..	..	..	0
Depressed	..	1	..	..	..	1	2
Juvenile	1	..	..	1	1	..	3
Total	1	5	4	2	2*	3	17

* One patient died.

(3) Spinal fluid Wassermann test. Lower degrees of positivity in the cerebrospinal fluid Wassermann titer were almost invariably observed following penicillin plus malaria. In only 1 case was there no decrease in the Wassermann titer, and in this instance the Wassermann reaction was the only component of the abnormal fluid which failed to respond to treatment within one year.

(*e*) Retreatments: None of the patients in this group have been retreated.

A COMPARISON OF THE RESULTS OF THERAPY WITH PENICILLIN ALONE WITH THOSE OF THERAPY WITH PENICILLIN PLUS MALARIA

Although the number of patients treated still is too small to permit definitive, statistically valid conclusions, it is of interest to compare the results of treatment with penicillin alone with those obtained from therapy with penicillin plus malaria.

In comparing the two groups, the following factors of selection may be noted: 1. Age and sex distribution are strictly comparable, but the factor of race selection is present. No Negro patients were treated with malaria plus penicillin. 2. No factor of selection based on the type of psychosis present on admission exists. 3. There was a tendency to treat patients whose symptoms were of longer duration with penicillin plus malaria. 4. The total amount of penicillin was generally greater among patients treated with penicillin alone. 5. No significant difference based on the amount of or response to previously administered antisyphilitic treatment is apparent. 6. Because experimental treatment with penicillin plus

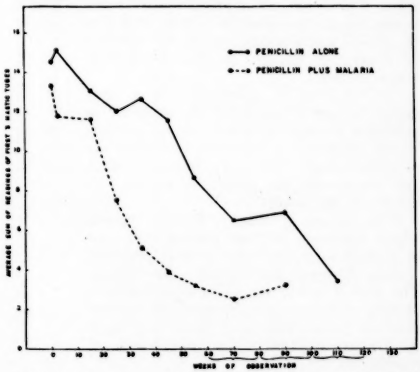

Chart 2.—Changes in colloidal mastic test following treatment with penicillin alone and penicillin plus malaria.

3. Stokes, J. H.; Sternberg, T. H.; Schwartz, W. H.; Mahoney, J. F.; Moore, J. E., and Wood, W. B., Jr.: The Action of Penicillin in Late Syphilis, Including Neurosyphilis, J. A. M. A. **128:** 73 (Sept. 9) 1944. Gammon, G. D.; Stokes, J. H.; Lentz, J. W.; Steele, W. H.; Rose, E. K.; Scott, J. Scott, D. M., Jr., and Ornsteen, A. M.: The Immediate and Early Effects of Penicillin on Syphilis of the Central Nervous System, Tr. Am. Neurol. A. **70:** 65, 1944. Goldman, D.: Treatment of Neurosyphilis with Penicillin: A Preliminary Report, J. A. M. A. **128:** 274 (May 26) 1945. Neymann, C. A.; Heilbrunn, G., and Youmans, G. P.: Experiments in the Treatment of Dementia Paralytica with Penicillin, ibid. **128:** 433 (June 9) 1945. Stokes, J. H.; Beerman, H.; Ingraham, N. R., Jr.; Lentz, J. W.; Morgan, H. G.; Gammon, G. D.; Steele, W.; Rose, E. K., and Gyorgy, P.: Penicillin in Late Syphilis: An Interim Report, Am. J. Syph., Gonor. & Ven. Dis. **29:** 313, 1945. Rose, A. S.; Trevett, L. D.; Hindle, J. A.; Prout, C., and Solomon, H. C.: Penicillin Treatment of Neurosyphilis: A Preliminary Report of Seventy Cases Followed from Four to Twelve Months, ibid. **29:** 487, 1945. Rosanoff, W. R., and Norman, J. K.: Report of 2 Cases of Paresis Treated with Penicillin, South. M. J. **38:** 819, 1945. Callaway, J. L., and others: The Use of Penicillin in the Treatment of Syphilis of the Central Nervous System, Am. J. Syph., Gonor. & Ven. Dis. **30:** 110, 1946. Gammon, Stokes, Beerman, Ingraham, Lentz, Morgan, Steele and Rose.[4]

malaria was started after that with penicillin alone, the number of patients in group B is smaller and the duration of follow-up generally shorter than in group A. All in all, it may be stated that the factors of selection favor group A, i. e. those treated with penicillin alone.

Despite this, the results of therapy, both from the standpoint of improvement in mental status and somatic signs and in respect to improvements in the cerebrospinal fluid abnormalities, are better following penicillin plus malaria than following penicillin alone. Charts 2 and 4 illustrate graphically the superiority of penicillin plus malaria over penicillin alone in respect to alterations in the colloidal mastic test and in the Wassermann titer respectively.

COMMENT

Our results indicate, as do those of other groups of observers,[3] that penicillin gives promise of becoming a valuable therapeutic agent in the treatment of dementia paralytica. Clinical improvement and, to an even more impressive degree, improvement in the spinal fluid abnormalities follow therapy with this antibiotic substance. Clinical improvement in the paretic psychosis does not necessarily parallel improvement in the cerebrospinal fluid. We have, however, observed no case in which amelioration of the paretic manifestations was not accompanied by improvement in the spinal fluid abnormalities.

The results of this study do not support the contention of Gammon and his associates[4] that whatever benefit is derived from penicillin therapy will be apparent within two months. There was, on the contrary, evidence of gradual and generally well sustained improvement, especially in the spinal fluid. Our results with penicillin-malaria treatment administered concurrently are, we believe, so superior to those with penicillin alone in the treatment of dementia paralytica that it is our present conviction that the former is the treatment of choice. Treatment with commercial penicillin alone may be valuable for patients whose age and general physical condition preclude the use of malarial therapy.

The concurrent use of penicillin and malaria is technically possible because the drug has no therapeutic effect in this infection,[5] and none was observed in our cases. Combined therapy was undertaken originally, not only for this reason, but also because of the suggestion of Eagle and Musselman[6] that the treponemicidal effect of penicillin is enhanced at temperatures within the range of 37 to 42 C. (98.6 to 107.6 F.). Whether the superior results of concurrent penicillin and malarial therapy in our patients were due to the enhanced treponemicidal effect of penicillin at fever temperatures, to additive or synergistic effects of the two forms of therapy or to a combination of the two cannot be stated definitively. The last of these three possibilities seems the most likely.

SUMMARY

1. Forty-one patients with dementia paralytica have been treated with commercial penicillin: 24 with penicillin alone, 17 with penicillin and malarial therapy.

2. Penicillin alone, in doses ranging from 2.0 to 10.0 million units, produced at least some degree of clinical improvement in 11 of 24 patients (46 per cent). Improvement in the spinal fluid abnormalities generally was apparent. As a rule the spinal fluid cell count and total proteins promptly became normal, and the colloidal gold and Wassermann tests gradually improved.

3. Penicillin administered concurrently with malarial therapy resulted in clinical improvement in at least

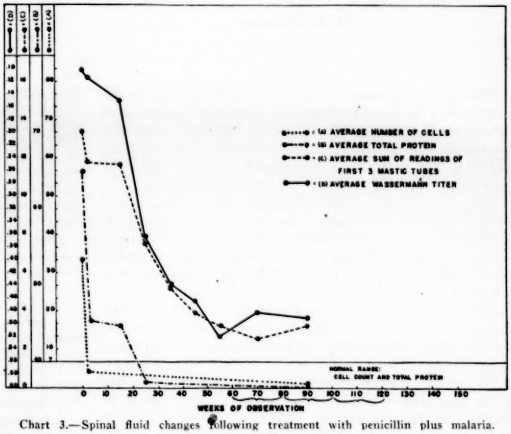
(A) AVERAGE NUMBER OF CELLS
(B) AVERAGE TOTAL PROTEIN
(C) AVERAGE SUM OF READINGS OF FIRST 3 MASTIC TUBES
(D) AVERAGE WASSERMANN TITER
NORMAL RANGE: CELL COUNT AND TOTAL PROTEIN
WEEKS OF OBSERVATION

Chart 3.—Spinal fluid changes following treatment with penicillin plus malaria.

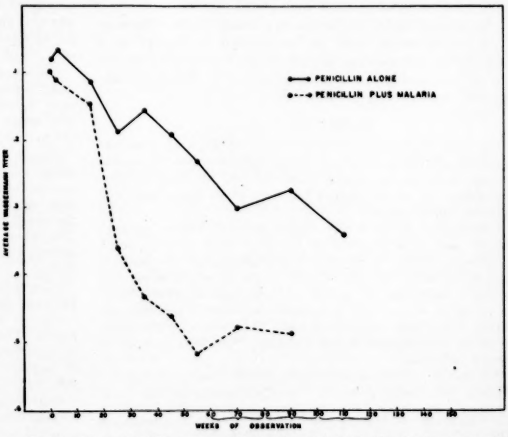

Chart 4.—Changes in Wassermann titer (cerebrospinal fluid) following treatment with penicillin alone and penicillin plus malaria.

4. Gammon, G. D.; Stokes, J. H.; Beerman, H.; Ingraham, N. R., Jr.; Lentz, J. W.; Morgan, H. G.; Steele, W., and Rose, E. K.: Penicillin in Neurosyphilis: Effect on Blood and Spinal Fluid, J. A. M. A. **128:** 653 (June 30) 1945.

5. Hindle, J. A.; Rose, A. S.; Trevett, L. D., and Prout, C.: Effect of Penicillin on Inoculation Malaria: Negative Report, New England J. Med. **232:** 133, 1945.

6. Eagle, H., and Musselman, A. D.: The Spirocheticidal Action of Penicillin in Vitro and Its Temperature Coefficient, J. Exper. Med. **80:** 493, 1944.

10 of 17 patients (58 per cent). Improvement in the spinal fluid abnormalities was even more complete than with penicillin alone.

4. The effectiveness of concurrent penicillin-malaria therapy is such as to make it, for the present at least, the treatment of choice for patients with dementia paralytica.

PHEOCHROMOCYTOMA AND CHRONIC HYPERTENSION

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Pheochromocytoma (chromaffin cell tumor, paraganglioma) is associated usually with the syndrome of paroxysmal hypertension. Recent reports, however, emphasize the protean manifestations of the disease, including the simulation of hyperthyroidism [1] and the occurrence of diabetes [2] and chronic hypertension.[3]

Individual cases of pheochromocytoma, because of their relative rarity, have been regarded in the light of medical curiosities. Studied as a group, however, certain features emerge which demonstrate a rather remarkable resemblance to idiopathic hypertension. Indeed, in those cases in which the paroxysmal features have been absent or overshadowed the disease has been diagnosed as essential hypertension until operation, autopsy or prolonged clinical investigation has indicated its true nature.[4]

The significance of pheochromocytic hypertension lies in the fact that it is a form of human hypertension in which may be studied the effects of removal of the etiologic agent on the blood pressure and on the secondary cardiovascular-renal manifestations.

An examination of the phenomenon of pheochromocytic hypertension may be introduced by report of a case which is somewhat unique in displaying the features not only of malignant hypertension but of diabetes mellitus and hyperthyroidism as well:

REPORT OF CASE

Observations Prior to Hospitalization.—D. H., a white woman aged 23, gave a past history which included whooping cough, mumps and measles during childhood and an alleged hypothyroidism for which thyroid had been given for a time with apparent improvement.

Investigation of the family history revealed that the patient's mother had been hypertensive for more than thirteen years, at present having a blood pressure averaging 200 mm. of mercury systolic, 160 mm. diastolic. At 17 years of age the patient's sister had a period of hypertension which lasted for at least a year and was associated with a pseudocyesis, during which time her pressure had been recorded repeatedly in excess of 160 systolic, 110 diastolic; her blood pressure at present is normal.

The mother of the patient stated that the health of both her children had always given her "trouble" and placed the blame for this on the father, concerning whom she could give little information except that she had divorced him because of his abnormal sexual habits. Six children by a second husband were all alive and apparently normal.

The patient was first seen in the King County Hospital clinic on March 9, 1945 complaining of sharp pain in the epigastrium radiating into the pubis and the back. There had been no bowel movements for five days, and the pain had begun simultaneously with the constipation. The abdomen was uniformly and moderately tender; there were hard feces in the rectum. Urinalysis revealed a trace of albumin and 1 per cent of sugar. She was treated for constipation and sent home.

The patient returned on May 25, 1945 complaining of abdominal pain associated with the vomiting two to five times daily of a green bilelike material. She gave the additional history that similar episodes had been occurring for a year and a half with a resultant reduction of weight from 197 to 150 pounds (89 Kg. to 68 Kg.). There had been a progressive deterioration of eyesight during this period. She also described attacks of shooting pain in the occiput and in the back of the neck, feelings of steel bandlike compression in the head, palpitation and perspiration. These attacks apparently were unrelated to the vomiting episodes.

First Admission.—Further outpatient study was deemed inadvisable and the patient was admitted to the hospital June 2, 1945 as a diagnostic problem with a large psychosomatic element in her complaints. Examination at this time evidenced great loss of weight, although the skin was moist and no dehydration phenomena were apparent. Vision was limited to finger counting at 6 feet. The heart seemed normal except for coupled first sounds. The blood pressure was 140 systolic, 110 diastolic. The abdomen was soft, and the lower portion was tender; a fat pad with striae was present. The reflexes were hypoactive, and mental reactions appeared slow and delayed.

Laboratory examination revealed that the spinal fluid was normal. The basal metabolic rate was + 38. The specific gravity of the urine was 1.022, and there were faint traces of albumin and sugar. The blood urea nitrogen was 41 mg. per hundred cubic centimeters. The serologic tests were negative. Skull and gastrointestinal x-rays were normal.

Funduscopic examination revealed bilateral papilledema with many hemorrhages and exudates, full veins and arteries which were narrowed grade 1, sclerosed grade 2 with localized narrowings grade 1. The blood pressure at this time was 174 systolic, 136 diastolic.

Despite a soft diet supplemented by intravenous glucose and saline solution, vomiting persisted. A glucose tolerance test was performed. The fasting sample yielded 220 mg., the half hour specimen 293 mg., the one hour specimen 361 mg. and the two hour specimen 315 mg. per hundred cubic centimeters. The carbon dioxide combining power was 73 volumes per cent and the cholesterol level was 360 mg. per hundred cubic centimeters.

Coincidental with the giving of a weighed diet (carbohydrate 150 Gm., protein 90 Gm. and fat 75 Gm.) and protamine zinc insulin in doses of 10 to 25 units daily, the patient's vomiting ceased. Potassium thiocyanate was administered for the control of hypertension without material success. During the period of hospitalization the patient manifested an intermittently rapid pulse rate up to 128 per minute and a temperature up to 99.8 F.

The patient was discharged on July 10, 1945 at the mother's request. The diagnosis on discharge was diabetes mellitus and group 4 hypertensive cardiovascular disease.

Second Admission.—The patient returned to the outpatient department on July 21, 1945 for the regulation of her diabetes. Potassium thiocyanate therapy was continued. The diabetes seemed fairly well controlled by the administration of protamine zinc insulin in doses of 20 units. The patient was not seen again until Oct. 4, 1945, when she came to the emergency room complaining of abdominal pain, vomiting and fever of two days' duration. She was hospitalized, with the provisional diagnosis of diabetic acidosis.

More detailed interrogation at this time amplified the information obtained on the first admission by eliciting a history of frequent nosebleeds, dyspnea, orthopnea and occasional pain

1. McCullogh, E. P., and Engel, W. J.: Pheochromocytoma with Hypermetabolism: Report of 2 Cases, Ann. Surg. **116:** 61, 1942.

2. Duncan, L. E., Jr.; Semans, J. H., and Howard, J. E.: Adrenal Medullary Tumor (Pheochromocytoma) and Diabetes Mellitus: Disappearance of Diabetes After Removal of the Tumor, Ann. Int. Med. **20:** 815, 1944.

3. Howard, J. E., and Barker, W. H.: Paroxysmal Hypertension and Other Clinical Manifestations Associated with Benign Chromaffin Cell Tumors (Pheochromocytomata), Bull. Johns Hopkins Hosp. **61:** 371, 1937. Kirschbaum, J. D., and Balkin, R. B.: Adrenalin-Producing Pheochromocytoma of the Adrenal Associated with Hypertension: Report of 3 Cases, Ann. Surg. **116:** 54, 1942. Thorne, G. W.; Hindle, J. A., and Sandmeyer, J. A.: Pheochromocytoma of the Adrenal Associated with Persistent Hypertension, Ann. Int. Med. **21:** 122, 1944. Wells and Boman.[5]

4. Binger, M. W., and Craig, W. M.: An Atypical Case of Hypertension with a Tumor of the Adrenal Gland, Proc. Staff Meet., Mayo Clin. **13:** 17, 1938. Kremer, D. N.: Medullary Tumor of the Adrenal Glands, with Hypertension and Juvenile Arteriosclerosis, Arch. Int. Med. **57:** 999 (May) 1936. Phillips, B.: Intrathoracic Pheochromocytoma, Arch. Path. **30:** 916 (Oct.) 1940. McCullogh and Engel.[1] Thorne, Hindle and Sandmeyer.[3] Wells and Boman.[5]

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in the chest, unaccompanied by edema of the ankles, abdominal swelling, hemoptysis or significant cough. There was a history of irregular menses, with amenorrhea for the previous ten weeks. The general environment of the patient had been an unhappy one; she had progressed only to the third grade in school and had received no tutoring at home. She felt that her parents preferred her sister to herself, and she engaged in little activity, spending most of her time in bed.

Physical examination on this occasion revealed that the patient was lethargic, she was pale and her level of general intelligence appeared low. The skin, particularly that of her palms, was wet with perspiration; there was moderate pigmentation of the dorsal surfaces of the hands. The tongue was tender and angry in appearance and the breath was heavy. Suprasternal pulsations were in evidence. The thyroid was not palpable and the pulmonary fields were clear. The heart appeared enlarged to percussion, with the point of maximum impulse approximately 3 cm. lateral to the midclavicular line in the fifth interspace. The sounds were forceful, with a split second sound, a short systolic murmur at the apex and the suggestion of a thrill. The rhythm was regular, the rate 120 per minute and the blood pressure 190 systolic, 160 diastolic. The scaphoid abdomen seemed somewhat doughy and was tender on deep palpation. None of the abdominal or pelvic viscera appeared abnormal and no edema was noted.

Funduscopic examination showed choked disk, 3 to 4 diopters, together with many hemorrhages and exudates. There were generalized and localized narrowings grade 2 to 3 and sclerosis grade 3 of the retinal arterioles. The patient was barely able to distinguish fingers at 18 inches. The observations were interpreted by the eye consultant as diabetic retinitis with group 4 hypertensive changes.

Laboratory examination of the blood revealed a count of 4,000,000 red cells with 11.3 Gm. of hemoglobin per hundred cubic centimeters and a count of 17,700 white cells with 78 per cent polymorphonuclear neutrophils. Urinalysis showed a specific gravity of 1.014 with a trace of sugar, albumin 1 plus and occasional pus cells. A series of urinalyses gave essentially the same picture. The Bence Jones protein reaction was negative. The urea nitrogen was 22 mg. per hundred cubic centimeters, the phenolsulfonphthalein excretion was 29 per cent in one hour and the urea clearance was 70 per cent of normal. In a glucose tolerance test the fasting blood sugar was reported as 173 mg. per hundred cubic centimeters. The serum proteins were within normal limits. The blood cholesterol was 222 mg. per hundred cubic centimeters. Sulfobromophthalein and hippuric acid tests gave normal results. Determinations of the basal metabolic rate ranged from + 36 to + 44.

The electrocardiogram revealed a diphasic QRS complex in lead 3 with a Q wave in lead 3 which measured 3 millivolts, an R type monophasic QRS complex in lead 4, a depression of the ST intervals in leads 1 and 2 with inversion of the T wave and a flat ST interval in lead 3. These changes were interpreted as signifying ventricular strain probably associated with a concentric hypertrophy.

During the ensuing weeks the patient had intermittent episodes of vomiting and headache. The weight fell to 100 pounds (45 Kg.). The diabetes was difficult to control. On a fixed diet (carbohydrate 150 Gm., protein 70 Gm. and fat 50 Gm.) the total insulin requirement varied from 15 to 45 units. On some days undesirable reactions to the insulin would occur on the same dosage which on other days was associated with a large excretion of sugar in the urine.

In an attempt to relieve the hypermetabolism a trial of thiouracil therapy was instituted, 0.6 Gm. of the drug being given daily. However, no effect was obvious on either the symptoms or the metabolic rate, and administration of the drug was discontinued after several weeks.

A study of the patient's blood pressure on twenty-four successive days (fig. 1) showed an average pressure of 201 mm. of mercury systolic, 148 mm. diastolic. However, on one occasion it was as low as 119 systolic, 94 diastolic. The highest pressure was recorded as 260 systolic, 210 diastolic. The basal (6 a. m.) blood pressure was not consistently the lowest; in fact the reading averaged a higher value at this time of the day than during the afternoon, when one would ordinarily anticipate a greater elevation.

All these observations were compatible with the presence of an adrenal medullary tumor. Accordingly, retrograde pyelography was performed. The resultant roentgenogram (fig. 2) showed a rotation and displacement downward of the left kidney. Subsequently, massage of the left adrenal area was productive of an elevation in blood pressure from 150 systolic and 110 diastolic to 220 systolic and 190 diastolic within five minutes.

On November 24 exploration of the left renal area was performed by Dr. J. N. Nelson. Pentothal sodium anesthesia was employed and continuous oxygen was supplied through an endotracheal catheter. The operation was hardly under way when the patient became pulseless and ceased breathing. The blood pressure could not be obtained. Attempts at immediate intravenous medication, including cut-down, did not succeed in restoring the pulse. An intrasternal needle was inserted, and during the ensuing hour and a half the patient was given a total of 8 cc. of epinephrine hydrochloride 1:1,000 solution and 50 cc. of adrenal cortex extract intrasternally. Three cc. of epinephrine in oil in a 1:500 solution together with 20 mg. of desoxycorticosterone acetate was administered intramuscularly. Respiration was carried on for forty-five minutes by intermittent pressure on the bag of the anesthesia machine. An adrenal tumor mass weighing 215 Gm., well encapsulated, was removed. Toward the close of the operation the blood pressure and pulse returned, and the patient resumed voluntary breathing.

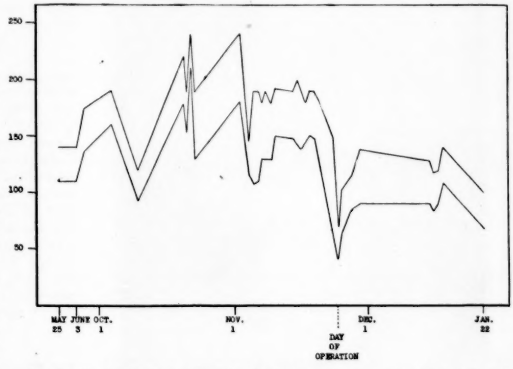

Fig. 1.—Blood pressure variations in pheochromocytoma; comparison of systolic and diastolic values, which were lowest on the day of operation.

The postoperative course was relatively smooth. The patient's blood pressure on return to her room was 70 systolic, 40 diastolic. The pulse was regular and the rate was 100 per minute. During the first twenty-four hours fluids, including 1 unit of blood, were administered by various routes to a total of approximately 4,000 cc. A total of 3 Gm. of salt was administered by mouth. One ampule of epinephrine in oil was given every four hours. An additional 50 cc. of adrenal cortex extract in isotonic solution of sodium chloride was administered subcutaneously. Ten mg. of desoxycorticosterone acetate was given twelve hours postoperatively.

The dosage of epinephrine in oil was reduced to 1 cc. every eight, then every twelve, hours and discontinued on the third day. Operative and postoperative therapy are summarized in table 1. The patient's blood pressure rose gradually to normal levels. The only striking feature of the postoperative course was a temporary urinary suppression, incomplete, together with

a mild generalized edema. For this reason additional quantities of desoxycorticosterone acetate and adrenal cortex extract were not given after the first twenty-four hours. Urinary secretion became normal, and the edema subsided within a few days. Some degree of urinary and fecal incontinence persisted for approximately ten days.

On the second day the patient was able to take a light diet. On the fifth day a moderate distention developed which was relieved by the administration of enemas and the use of gastric suction. The patient from this point onward made continuous progress. The blood pressure remained within normal limits, the highest pressure recorded being 140 systolic, 108 diastolic, with an average over seventeen days of 117 systolic, 81 diastolic. The pulse, however, continued to be somewhat rapid and the rate varied from 100 to 120 per minute. The patient had her first menstrual period in five months during the second postoperative week and has been regular since that time.

The repetition of laboratory studies following the operation revealed a number of changes. Use of the hematocrit revealed

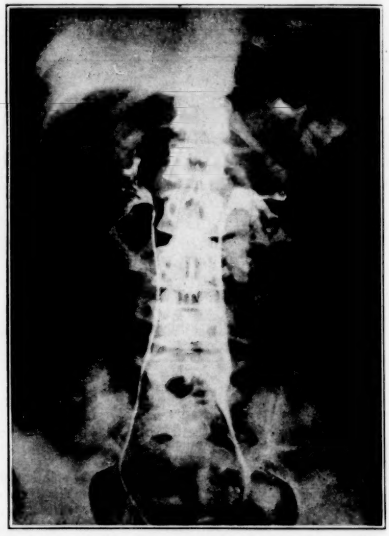

Fig. 2.—Retrograde pyelogram showing rotation and displacement downward of the left kidney.

that the blood corpuscles fell within twenty-four hours after the operation from 52 per cent to 36 per cent, despite minimum bleeding during the operation and the administration of 500 cc. of blood immediately afterward. They remained between 31 per cent and 32 per cent during the latter part of the postoperative course, being unaffected by subsidence of the edema mentioned previously. Throughout this time the blood chlorides remained within normal limits. Fractional examinations of the urine for sugar and acetone were consistently negative from the day of operation onward, and no insulin was given. The basal metabolic rate fell to an average of + 12. The phenolsulfonphthalein excretion rose to 70 per cent. The urea clearance of the blood averaged 72 per cent and the blood cholesterol level rose to 267 mg. per hundred cubic centimeters. The comparison between the preoperative and the postoperative laboratory values is illustrated in figure 3. Repetition of the glucose tolerance curve approximately three weeks postoperatively showed a fasting sugar of 124 mg. per hundred cubic centimeters, a rise to 382 mg. at one-half hour, a fall to 90 mg. at the end of two hours and maintenance subsequently at normal levels, with a reading of 80 mg. per hundred cubic centimeters at the end of four hours.

Funduscopic examination on December 19 showed that the edema of the disks was receding. Few hemorrhages and exudates were seen. The vision had improved to permit finger counting at 8 feet.

The patient was discharged on December 22. On her return one month later for a checkup the pulse rate and blood pressure

TABLE 1.—*Summary of Therapy During and Following Removal of Pheochromocytoma*

Period	Epinephrine 1:1,000	Epinephrine in Oil	Adrenal Cortex Extract	Desoxycorticosterone Acetate	Other
During operation	8 cc. subcutaneously	3 cc. intramuscularly	50 cc. subcutaneously	20 mg. intramuscularly	Artificial respiration 45 min.
1st postoperative day	....	1 cc. every 4 hr. intramuscularly	50 cc. subcutaneously	10 mg. intramuscularly	Blood 500 units intravenously; salt 3 Gm.
2d postoperative day	....	1 cc. every 8 hr. intramuscularly			
3d postoperative day	.....	1 cc. every 12 hr. intramuscularly			

were within normal limits. The electrocardiogram showed a complete reversion to a normal type of tracing, with disappearance of the T wave inversion in the limb leads and a reduction in the QRS voltage (fig. 5). X-ray examination of the chest showed that the size of the heart was within normal limits. Examination of the fundi revealed a negligible amount of papilledema and the disappearance of all hemorrhages and soft exudates. The once active retinitis, however, had left many old scars. Vision had improved to 20/100 in the left eye and finger counting at 8 feet in the right eye. Repetition of the glucose tolerance curve (fig. 4) gave a completely normal result: fasting 114 mg., half hour 182 mg., one hour 136 mg., two hours 100 mg., three hours 104 mg. and four hours 107 mg. per hundred cubic centimeters. The patient's weight was 136 pounds (62 Kg.), and she was symptom free.

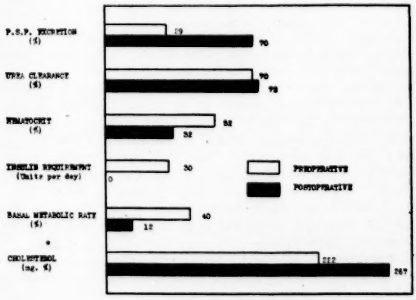

FIGURE 3.

Fig. 3.—Hematologic and chemical values in pheochromocytoma.

Examination of the tumor disclosed that it was a pheochromocytoma. No abnormal cortical elements were observed. The gross and microscopic appearances are illustrated in figures 6, 7 and 8.

COMMENT ON CASES FROM THE LITERATURE

The Natural History of Pheochromocytic Hypertension.—For the purpose of clarifying the incidence and pathogenesis of chronic hypertension in pheochromo-

cytomas, an analysis was made of 50 additional cases selected because of completeness of clinical or of pathologic data.[5]

The standard for determining chronic hypertension consisted of the presence between attacks of minimum blood pressure levels in mm. of mercury of either (*a*) 140 systolic and 90 diastolic or (*b*) 95 diastolic.

Using these criteria, it became evident that a minority (14 cases) manifested only intermittent hypertension, while a majority (37 cases) were chronically hypertensive when first seen or became so in the course of varying periods of observation. Four patients of the chronic group displayed a malignant hypertensive syndrome characterized by a rapid course, a decided elevation in blood pressure and severe retinitis.

Of the 14 cases comprising the intermittently hypertensive group, the course of the disease in 12 was interrupted by surgical removal of the tumor. Whether these patients otherwise would have progressed into the chronically hypertensive stage is conjectural. However, among the 17 patients in the series as a whole in whom removal of the tumor was not attempted, chronic hypertension was observed in all but 2. In general the data support the suggestion of Wells and Boman [6] that all patients with functioning pheochromocytomas will progress to a stage of chronic hypertension if they live long enough.

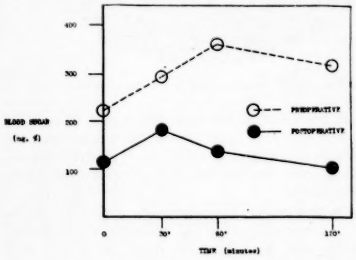

Fig. 4.—Glucose tolerance curve in pheochromocytoma.

One or more evidences of cardiovascular disease were manifested by 24 patients of the series, all but 1 of whom were in the chronically hypertensive group. Definite cardiac enlargement was reported in 17, while the weight of the heart was above average and at the outer limits of normal for their sex in 3 others. Electrocardiograms which were abnormal for the resting patient were recorded in 10 instances, the usual abnormality consisting in a left axis deviation accompanied by depression or inversion of the ST segments. Hemiplegic attacks occurred in 2 patients, 1 of whom also suffered a myocardial infarction.

In autopsies on 18 patients of the series, myocardial hypertrophy was demonstrated in 15, being reported in association with generalized atherosclerosis alone in 4 instances, with nephrosclerosis alone in 3 and with both in 4.

Altered renal function of mild to moderate degree was observed in 24 of the 37 chronically hypertensive patients. Albuminuria, intermittent or constant, was present in 20, subnormal phenolsulfonphthalein excretion in 11, abnormal sediments in 10 and azotemia in 2. Of 4 cases in which urea clearances were reported, values were normal in 2 and increased in 2. Maximum specific gravities below 1.020 were mentioned in only 3 instances. It is noteworthy that in the intervals between paroxysms kidney dysfunction of any type was recorded in only 5 of the 14 cases of the intermittently hypertensive group.

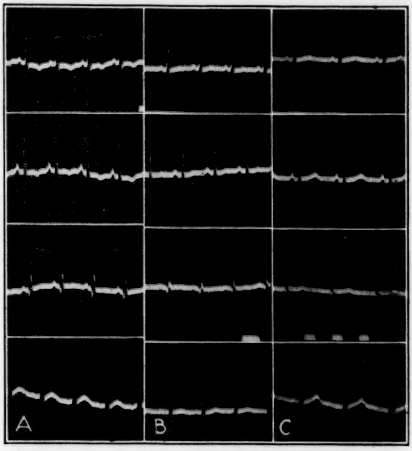

Fig. 5.—Serial electrocardiograms illustrating the regression of abnormalities following the removal of the tumor: *A*, preoperative, *B*, postoperative one month and *C*, postoperative two months.

No significant renal pathologic changes were reported in 9 of the 16 chronically hypertensive patients who came to autopsy. Mild to severe nephrosclerosis was found in the remainder. Clinical data in these two groups of cases are contrasted in table 2. In general the duration of symptoms was longer, the retinitis more intense, the renal functional changes more fre-

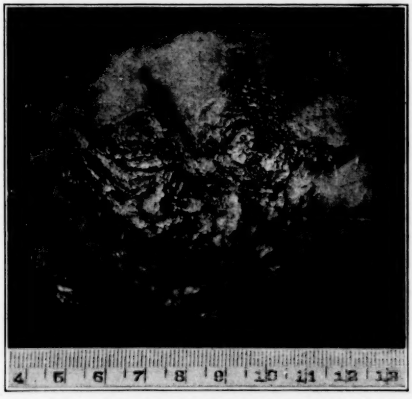

Fig. 6.—Gross appearance of tumor.

5. References to reports not specifically mentioned in the text are omitted from this publication but are included in the author's reprints.
6. Wells, A. H., and Boman, P. G.: The Clinical and Pathologic Identity of Pheochromocytoma, J. A. M. A. **109**: 1176 (Oct. 9) 1937.

quent, the diastolic pressure higher and the weight of the heart greater in those cases which exhibited renal disease. However, correlation was not strict. Moderate to severe retinitis was seen in 3 patients with normal kidneys, 1 of whom died apparently of uremia with a terminal accretion in the blood of urea nitrogen of 150 mg. per hundred cubic centimeters. In contrast, the group with renal vascular changes included 2 who displayed no retinitis and 2 others in whom no disturbance of renal function had been demonstrated during life. Only 1 patient of this group had manifested azotemia.

The absence of renal structural pathologic changes in so many of the chronically hypertensive patients indicates that although nephrosclerosis is one of the

Fig. 7.—Gross appearance of tumor; same scale as in figure 6.

vascular phenomena which may be associated with the more intense or more prolonged grades of pheochromocytic hypertension it is not a necessary intermediary factor in their production.

The major causes of death in patients not operated on were acute left ventricular failure, cerebrovascular accidents and chronic congestive failure of the heart.

History of Pheochromocytic Hypertension Interrupted by Removal of the Etiologic Agent.—The concept that pheochromocytic hypertension is due initially to the activity of an angiospastic agent has been predicated on the demonstration of an epinephrine-like substance in the blood during exacerbations, the isolation of epinephrine from the tumors and the cure of intermittent paroxysmal hypertension following the removal of the tumor. It has been indicated, however, that intermittent pheochromocytic hypertension, when not surgically remedied, progresses into a chronic phase associated with structural changes in the heart, blood vessels and kidneys. Alterations of this nature, when observed in idiopathic hypertension, have been considered the organic accompaniment, if not the cause, of an eventually irreversible, self-perpetuating hypertension with its various morbid sequelae.[7] It seemed of

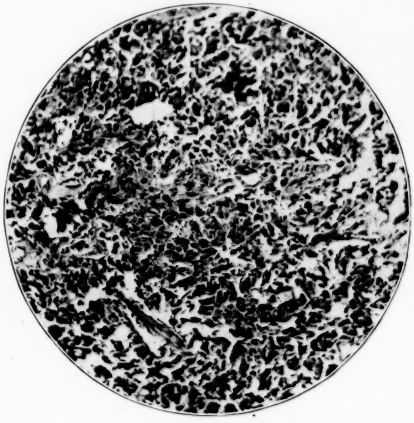

Fig. 8.—Microscopic appearance of the tumor.

importance, therefore, to examine the course of patients with pheochromocytic hypertension in whom surgical intervention was attempted subsequent to the progression of the disease into the stage of persistent elevation of blood pressure.

In the series under consideration, removal of the tumor was accomplished on 22 patients with chronic hypertension, with postoperative death in 2 and fatal metastases in a third. The remaining 19 patients included 1 in whom a sympathectomy had been performed, another whose thyroid had been removed without relief of symptoms and 2 whose disease had been

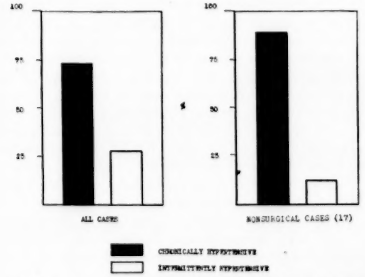

Fig. 9.—Percentage of occurrence of hypertension in 51 cases of pheochromocytoma and in 17 cases in which operation was not performed.

diagnosed initially as malignant hypertension. The ages within the group varied from 16 to 65, the average being 47. The mean duration of symptoms was approx-

7. Boyd, W.: Textbook of Pathology, ed. 4, Philadelphia, Lea & Febiger, 1943, pp. 601-602. White, P. D.: Heart Disease, ed. 3, New York, Macmillan Company, 1944, p. 430.

imately four years. Disturbances of renal function were present in 13 cases, hypertensive retinitis of grades 1 to 4 severity in 12 and one or more cardiac abnormalities in 6.

As the result of operation the resting blood pressure, which preoperatively averaged 168 systolic, 110 diastolic, fell to normal in every instance, the mean being 128 systolic, 85 diastolic during periods of observation up to three years. Improvement in renal function was reported in 5 patients who exhibited increased concentrating power and phenolsulfonphthalein excretion, reduction of albuminuria and disappearance of abnormal sediments. Appreciable to complete regression of the retinitis was noted in 4 of the 5 patients for whom both preoperative and postoperative findings were stated. The disappearance of cardiac abnormalities was observed in 4 instances, with the regression of a moderately enlarged heart to normal size in 1, the cessation of apical and basal murmurs in another and the reversion of electrocardiographic abnormalities in 2.

Although the series is small and the data are incomplete in many particulars, the uniform fall in blood

TABLE 2.—*Comparison of Clinical Data in Nine Cases of Chronic Pheochromocytic Hypertension with Normal Kidneys and in Eight Cases with Nephrosclerosis*

	Normal Group	Nephrosclerotic Group
Age (yrs.)	37	35
Duration of symptoms (yrs.)	3.5	8.4
Systolic pressure	206	183
Diastolic pressure	115	124
Weight of heart (Gm.)	377	511
Fundi: number of patients with		
Retinitis grade 4	1	2
Retinitis grade 3	1	3
Retinitis grade 2	1	0
Retinitis grade 1	0	1
Normal	6	2
Albuminuria	3	5
Reduced phenolsulfonphthalein excretion	2	2
Azotemia	1	1

pressure following the operation and the attendant regression of cardiovascular-renal abnormalities indicate that the development and persistence of chronic hypertension in pheochromocytomas are directly dependent on the continued action of the angiospastic agent produced by the tumor.

CONCLUSIONS

Pheochromocytic hypertension, unless terminated by operation or early death, tends to the production of a chronic disease characterized by persistent systolic and diastolic elevation of pressure and secondary changes in the cardiovascular-renal system.

The progression from an intermittent functional dyscrasia to a permanent disturbance with associated structural alterations is the result of a continued direct action by the angiospastic agent involved. No evidence was found to indicate that this secondary phase is mediated through the kidney or becomes a self-perpetuating mechanism coincident with the onset of vascular sclerosis.

The resemblance between chronic pheochromocytic hypertension and idiopathic hypertension suggests the operation of basically similar mechanisms in the production of both diseases. This resemblance is not to be construed as indicating that the angiospastic agent in idiopathic hypertension is necessarily epinephrine.

TEMPORAL ARTERITIS

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It is now more than thirteen years since Horton's [1] original report of a previously undescribed condition which has become known as temporal arteritis. In this time there have appeared in the literature reports of 35 cases, including Horton's, which are purported to be examples of this condition. Of these, 27 are unquestionable instances of temporal arteritis although histologic confirmation is lacking in some. The remaining 8 cases do not appear to be well enough substantiated clinically or histologically to be considered as more than probable cases of temporal arteritis.

It is clear from even a cursory examination of the literature on this subject that the term "temporal arteritis" is inadequate for two reasons: (*a*) the obvious involvement in many cases of other arteries of the head and possibly of still other, more remote, vessels and (*b*) the paucity of information conveyed by the term, especially concerning the etiologic and pathologic features of this condition. However, for the sake of clarity I have used this term throughout this article and will not confuse the discussion by introducing a new nomenclature until the end.

My purpose in this paper is to report an additional instance of this peculiar condition, to summarize its clinical and pathologic aspects and to discuss its nosologic position.

REPORT OF CASE

History.—D. G., a woman aged 55, Greek, was admitted to the service of Dr. George Baehr on March 9, 1945 with a chief complaint of headaches of five weeks' duration. The past history and family history were essentially noncontributory, specifically with reference to renal disease, arterial hypertension and allergic manifestations.

The present illness began five weeks before her admission to the hospital with severe bilateral temporoparietal headaches, which were usually more severe in the afternoons. Fever was first discovered on the fifth day of her illness. There had been no visual disturbance, evidence of neurologic disorder or gastrointestinal symptoms.

On admission to the hospital the patient was rather pale and appeared to be moderately ill. The temperature was 100.2° F. and the pulse rate 112 per minute. There were two hard, tender, pea sized nodules on the left temporal artery. The retinal arteries showed a moderate degree of arteriosclerosis. There was a harsh systolic murmur at the base of the heart but no evidence of cardiac enlargement. The blood pressure was 130 mm. of mercury systolic and 74 mm. diastolic. There were no other significant findings.

The blood count disclosed a moderate anemia with a hemoglobin of 68 per cent (Sahli). The leukocytes numbered 10,550 per cubic millimeter, of which the polymorphonuclears constituted 74 per cent, staff cells 1 per cent, lymphocytes 23 per cent, monocytes 1 per cent and eosinophils 1 per cent. The erythrocyte sedimentation time was twelve minutes for 18 mm. (much accelerated). The blood Wassermann reaction was negative. Blood agglutinations against the Brucella, typhoid-paratyphoid and dysentery groups gave negative results. The blood cholesterol level was 230 mg. per hundred cubic centimeters and the blood urea nitrogen 13 mg. per hundred cubic centimeters. The urine contained a faint trace of albumin and the sediment showed 3 to 4 white blood cells and an occasional red blood cell per high power field. Culture of the urine showed no growth.

From the Medical Service of Dr. George Baehr, the Mount Sinai Hospital.

1. Horton, B. T.; Magath, T. B., and Brown, G. E.: An Undescribed Form of Arteritis of the Temporal Vessels, Proc. Staff Meet., Mayo Clin. **7**:700-701 (Dec. 7) 1932.

Course.—During her entire hospital stay (approximately five weeks) the temperature remained elevated, usually reaching 102 F. in the evenings and occasionally rising as high as 103 F. Severe pains in the head persisted and were only incompletely relieved by codeine. Several new nodules appeared on both temporal arteries. These were clinically identical with the original lesion. The blood pressure remained at normal levels, and repeated examinations of the ocular fundi disclosed no new findings.

There were no electrocardiographic abnormalities on three separate examinations. The blood picture and urinary findings remained unchanged. A blood culture showed no growth. Roentgenographic examination of the chest was negative. Intravenous urography revealed bilateral bifid renal pelves and, incidentally, a calcification in the right trochanteric bursa. An allergic survey yielded essentially negative results. An electroencephalogram disclosed a normal pattern.

The clinical diagnosis of temporal arteritis was confirmed by biopsy of the right temporal artery, which showed a typical granulomatous inflammation in which numerous giant cells were present. A biopsy of a fragment of skin and muscle from the calf showed no abnormalities.

Following resection of a portion of the temporal artery there was only slight subsidence of the pain in the head, nor was relief obtained from irradiation of the temporal regions with x-rays, a measure which was tried because of the granulomatous nature of the lesion. About one month after admission to the hospital a tiny nodule or area of thickening was discovered on the right dorsalis pedis artery. One week later the patient left the hospital without much change having taken place in her condition.

Six months later, when seen in the follow-up clinic, she still had slight headache and stated that fever up to 100 F. had continued. A nodule was still palpable on the left temporal artery, and the thickening on the dorsalis pedis was unchanged. The remainder of the examination was negative.

Approximately one year after the onset of her illness the patient was clinically entirely well and was contemplating a trip to South America.

GENERAL CLINICAL FEATURES

A striking characteristic of temporal arteritis is the age at which it occurs. The youngest patient to be the subject of a report thus far was 55 and the average age of all the patients is 65. It appears to affect women more often than men in a ratio of almost 2:1.

As in the case just described, the outstanding symptom of this condition is pain, which often appears weeks before evidence of any inflammatory process in the involved arteries is discernible. The pain, which may be severe and almost constant, is chiefly temporal in location but, especially when vessels other than the temporal arteries are affected, may involve the occipital and parietal areas. Many patients have considerable pain in the region of the temporomandibular joint, making mastication difficult. Pains in the extremities have been present in 2 cases, but their significance is not clear.

Practically all patients have fever from the onset. This elevation of temperature may be very protracted, somtimes persisting for many months. While it is usually of a low grade, it may reach 103 F. There may be, in addition, malaise, weakness and profuse sweats. The appetite is often depressed, and in some cases a state of cachexia has been observed.

Ocular disturbances, some of a very serious nature, occur in a considerable number of cases.[2] These include photophobia, diplopia, ptosis and partial or complete loss of vision, which may be permanent.

Symptoms suggesting cerebral involvement have been observed in 3 instances.[3]

The significant physical findings are almost entirely limited to the head. Characteristically, a segment of one or both temporal arteries is prominent, indurated, nodular and exquisitely tender. The skin overlying the inflamed artery may be reddened and edematous. The arterial pulsation may be lost if thrombosis occurs. In some cases similar changes are observed with reference to arteries of the parietal, occipital or postauricular regions. One case has been reported in which the roof of the mouth was involved.[4]

In uncomplicated cases the ocular fundi exhibit only a degree of arteriosclerosis compatible with the age of the patient, but in the cases with disturbed vision, vascular lesions of the retina have been observed. These include hemorrhages, exudates, edema of the nerve head and thrombosis of the central retinal artery or of its branches.

In most of the cases a careful search for evidence of arterial disease in parts of the body other than the head has been made with negative results. In the cases mentioned by Horton,[5] and Jennings[6] and Scott and Maxwell[7] as possibly presenting signs of such arterial involvement, and in the case reported in the present paper, the evidence of such involvement consisted of either "thickening," "tenderness" or "involvement" of the artery (radial, brachial, carotid, dorsalis pedis), evidence which appears to be insufficient to arouse more than a suspicion of arteritis of these vessels. Pathologic examination has not been made of any of the supposedly affected arteries.

Although in a few cases attention has been directed to the renal arterial system by the discovery of albumin and some red blood cells in the urine, significant renal damage has not been observed in any case. Moreover, the incidence of arterial hypertension in patients with temporal arteritis is certainly not greater than one would expect in a group of elderly persons.

Laboratory Findings.—With the exception of microscopic examination of a portion of the inflamed artery, the laboratory supplies no definite assistance in establishing the diagnosis of temporal arteritis. A moderate anemia of the hypochromic type associated with a mild polymorphonuclear leukocytosis is usually present. Blood eosinophilia has not been noted. The erythrocyte sedimentation rate is usually much increased. The blood chemical findings have been consistently within normal limits except in 1 case in which hyperglycemia (without glycosuria) was discovered. Examination of the urine is usually negative. All serologic and immunologic studies have given negative results, and blood cultures have remained sterile. Bacteriologic investigations of excised segments of involved arteries will be discussed later. In the few cases in which allergic surveys were carried out no evidence of a state of hypersensitivity was obtained.

Histologic Picture.—Since others, especially Dick and Freeman [4] and Scott and Maxwell,[7] have given excellent summaries of the histologic findings in segments of

2. Murphy, J. R.: Syndrome of Temporal Arteritis, New York State J. Med. **42**: 2236-2237 (Dec. 1) 1942. Johnson, R. H.; Harley, R. D., and Horton, B. T.: Temporal Arteritis Associated with Loss of Vision: 2 Cases, Am. J. Ophth. **26**: 147-151 (Feb.) 1943. Shannon, E. W., and Solomon, J.: Bilateral Temporal Arteritis with Complete Loss of Vision, J. A. M. A. **127**: 647-649 (March 17) 1945. Horton and Magath.[5] Jennings.[6] Dick and Freeman.[4] Scott and Maxwell.[7] Bain.[3]

3. Bain, C. W. C.: Arteritis of the Temporal Arteries, Correspondence, Lancet **1**: 517 (Feb. 26) 1938. Sprague, P. H., and MacKenzie, W. C.: Temporal Arteritis (Horton-Magath Syndrome): Case, Canad. M. A. J. **43**: 562-564 (Dec.) 1940. Schaefer, C. L., and Sanders, C. E.: Temporal Arteritis, Am. Heart J. **24**: 410-411 (Sept.) 1942.

4. Dick, G. F., and Freeman, G.: Temporal Arteritis, J. A. M. A. **114**: 645-647 (Feb. 24) 1940.

5. Horton, B. T., and Magath, T. B.: Arteritis of Temporal Vessels: 7 Cases, Proc. Staff Meet., Mayo Clin. **12**: 548-553 (Sept. 1) 1937.

6. Jennings, G. H.: Arteritis of the Temporal Vessels, Lancet **1**: 424-428 (Feb. 19) 1938.

7. Scott, T., and Maxwell, E. S.: Temporal Arteritis: Case Report, Internat. Clin. **2**: 220-223 (June) 1941.

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affected arteries removed surgically, it is unnecessary to repeat them in detail. However, the outstanding features of the lesion are (*a*) its granulomatous nature, (*b*) the presence of cellular infiltration consisting chiefly of round cells and fibroblasts in all coats of the artery, (*c*) the occurrence of numerous giant cells in the media, (*d*) the frequency of thrombosis due to intimal involvement and (*e*) the absence of aneurysm formation.

Bacteriologic Studies.—In a number of cases, cultures were made of sections of arteries of which biopsies had been made. In Horton's original cases a strain of Actinomyces was found in pure culture, but these organisms were proved to be identical with a common strain of Actinomyces found in soil and were not considered of etiologic significance. In 3 other instances, different organisms were isolated. These include Streptococcus viridans, Staphylococcus aureus and "gram positive cocci in clusters" which were not further identified. In still other cases no growth was obtained even with the aid of special mediums and no organisms were seen on direct microscopic examination of stained sections.

Etiology.—It may safely be said that the etiology of temporal arteritis is entirely unknown. The few positive bacteriologic reports cannot be assigned much significance not only because of their small number but also because of their dissimilarity. Indeed, it is not even certain that the condition is the result of an infection, although it appears clinically and histologically to resemble an infectious process more than it does a degenerative or "allergic" state. In only 1 case reported [8] was there a distinct suggestion that a somewhat remote focus of infection might be related to the arteritis. In this instance there was an exacerbation after the extraction of three infected teeth.

Treatment.—Aside from resection of a segment of one of the involved arteries, a procedure which in some cases has relieved the pain and at the same time has provided material for pathologic study, the treatment of temporal arteritis is symptomatic. Horton and Magath suggested the administration of large doses of potassium iodide in conjunction with small doses of arsphenamine, but the limited experience with this treatment makes it impossible to draw conclusions concerning its value. Periarterial infiltration with local anesthetics and periarterial sympathectomy are other measures which might be tried. Radiotherapy in our case had no apparent effect.

Prognosis.—Despite the advanced age at which this illness manifests itself and the protracted course it usually pursues, complete clinical recovery appears to occur in the great majority of cases. Exception must be made in those patients having retinal lesions which may result in permanent visual impairment or even in blindness and in the rare cases in which there may be involvement of visceral or cerebral arteries such as those discussed later in this article.

COMMENT

From all the foregoing, one might describe temporal arteritis as an acute or subacute febrile illness, apparently an infection, although of unknown etiology, affecting elderly persons and characterized by a granulomatous type of inflammation of the temporal and other arteries of the head.

A number of interesting questions now present themselves with reference to the nosology of this condition. Several observers have already answered these questions in what seems to me to be a glib and uncritical manner, and while some of the opinions which have been expressed are probably correct they do not appear to have been based on a careful survey of the subject, a closer inspection of which may serve to strengthen some of these opinions and cast doubt on others but which will at any rate provide firmer grounds for any attempt to classify this condition.

The first problem arising in this connection is to decide whether temporal arteritis may not be a more or less localized manifestation of some other better known arterial disorder.

It may be said at the outset that syphilitic arteritis can be excluded from this discussion without further consideration and also that there is no serious evidence that temporal arteritis is a manifestation of tuberculosis. Not so easily dismissed, however, is the possibility that the condition may be an atypical form of the syndrome of periarteritis nodosa. Localized and relatively benign forms of the latter are well known, and the caliber of the vessels affected by the two processes is approximately the same. Both are characterized by fever, asthenia, leukocytosis and anemia. But there the resemblance ends, and it would appear that the weight of evidence is in favor of those who believe that periarteritis nodosa, even when localized, may be distinguished from temporal arteritis by the difference in age groups affected, by the absence of any evidence of allergic factors in the latter, and especially by the differences in the pathologic picture. The typical cellular infiltrate in periarteritis nodosa is composed mainly of polymorphonuclear leukocytes and eosinophils, while in temporal arteritis one finds chiefly mononuclear cells and fibroblasts, and only rarely are eosinophils seen. The giant cells which are so characteristic of temporal arteritis are not present in periarteritis nodosa, whereas the reverse is true with respect to the formation of aneurysms. These dissimilarities would seem sufficiently well defined to differentiate the two conditions even if it should be found that temporal arteritis is usually a generalized arterial disorder like periarteritis nodosa.

Another condition to be considered in attempting to classify temporal arteritis is thromboangiitis obliterans. Numerous examples of this disease occurring in vessels other than those of the lower extremities have been reported. However, there are differences in both the usual age of onset and the sex incidence in the two conditions. Phlebitis, which is almost an integral part of thromboangiitis obliterans, is unknown in temporal arteritis, and furthermore the arterial changes are so unlike from the pathologic point of view that they may be distinguished rather easily one from the other.

Other forms of arteritis, as seen for example in rheumatic fever, acute exanthems and in certain types of intoxication (such as ergotism) or as a result of trauma, are even less closely related to temporal arteritis and a detailed account of the points of difference seems unnecessary. Therefore the first question arising in connection with the determination of the nosologic position of temporal arteritis, namely "Is it a manifestation of any other better known form of arterial disorder?" may be answered in the negative.

This question having been disposed of with some degree of certainty, it is now necessary to inquire whether there is any more obscure form of inflammatory arterial disease of which temporal arteritis may be a part. Several observers in attempting to answer this question have called attention to the remarkable cases

8. Profant, H. J.: Temporal Arteritis, Ann. Otol., Rhin. & Laryng. **53**: 308-325 (June) 1944.

described by Barnard,[9] by Sproul and Hawthorne[10] and by Gilmour.[11] These are all examples of very unusual forms of arteritis involving the aorta and many of its branches, except Barnard's case, in which the aorta was spared. Careful postmortem studies in all 7 cases revealed a histologic picture quite similar to that seen in temporal arteritis, although significant differences appear to exist between the two groups and indeed within the first group itself.

In the case presented by Barnard there was a widespread infiltration of the media of several arteries by granulation tissue in which epithelioid cells and areas of necrosis were prominent. The intima, while hypertrophied and edematous, presented little or no cellular infiltration. Although giant cells, fibroblasts and lymphocytes also were present in the media, the total histologic picture does not seem identical with that of temporal arteritis. Barnard was convinced that his case was one of tuberculous arteritis despite his inability to demonstrate acid fast bacilli in the lesions and the absence of a tuberculous focus adjacent to any of the involved arteries. In this case there was nothing in the clinical course suggestive of arteritis affecting the external arteries of the head, and these were apparently not subjected to postmortem examination.

Sproul and Hawthorne[10] described 2 cases in which a diffuse, almost uniform, mesaortitis was unexpectedly revealed at necropsy. The intima and adventitia were not involved in these cases. The lesion consisted chiefly of an infiltration of lymphocytes, plasma cells and giant cells. No significant degree of fibroblastic invasion was present. In 1 of these cases the carotid and common iliac arteries were similarly involved and in the other only the iliacs. The rest of the arteries examined were not affected. Neither of these patients presented evidence of arterial disease of the head during life, and no postmortem examination of these vessels was made. The authors concluded that the lesion described by them did not conform to any previously known type of arterial reaction and represented a unique picture. In any event it appears possible on histologic grounds alone to distinguish it from temporal arteritis.

A few years later Gilmour[11] reported 4 similar cases, all showing a chronic arteritis characterized by the presence of numerous giant cells and involving the aorta, the branches of the aortic arch and the branches of these and possibly other arteries. Thrombosis of the intracranial portion of the internal carotid occurred in several of these cases and rupture of an aneurysm in another. None of these patients, 1 of whom was 23 years of age, presented clinical evidence suggesting arteritis of the superficial vessels of the head, and these arteries were not studied post mortem. There are also several other respects in which these cases differed clinically from temporal arteritis. However, Gilmour believes that the lesion is the same in the two groups of cases and that asymptomatic aortitis and arteritis of other vessels may occur in cases of frank temporal arteritis.

It will be noted that in none of the 7 cases discussed in the preceding paragraphs is there any evidence, clinical or pathologic, suggesting arteritis actually involving the temporal or other superficial arteries of the head. All 7 are cases of more or less chronic aortitis or arteritis histologically similar to but not necessarily identical with temporal arteritis and bearing little or no clinical resemblance to it. The evidence, therefore, that temporal arteritis is a part of this group or a special form of it is tenuous indeed. In this connection it should also be remembered that "arteries respond to many pathogenic agents, but with limited types of . . . reactions. Hence, from a given type of histologic reaction alone, conclusions about the specificity of the pathogenic factors cannot necessarily be drawn."[12] Thus it would seem wiser to reserve judgment concerning the relationship of temporal arteritis to cases of granulomatous arteritis not affecting the external arteries of the head and to avoid the facile expedient of grouping them all together.

However, there have been reported a few cases which give rise to something more than a suspicion that temporal arteritis may in some instances at least be a disorder involving arteries other than those of the head. These are the cases reported by Sproul[13] and by Chasnoff and Vorzimer.[14] In Sproul's case (1 entirely distinct from those previously discussed) there was rather definite clinical evidence of bilateral temporal arteritis consisting of pain, prominence and tenderness of the temporal arteries and loss of pulsation. In addition there were leukocytosis and increased erythrocyte sedimentation rate. This illness subsided in eight weeks, but the patient, a diabetic patient aged 68, died soon thereafter of pneumonia and cardiac failure. The pertinent postmortem finding was an aortitis and an arteritis of the carotid, innominate, subclavian, pulmonary, celiac, mesenteric, renal and iliac arteries closely resembling that seen in temporal arteritis. Microscopic examination of the temporal arteries was not made in this case either during life or post mortem. Rigorous proof of the coexistence of temporal arteritis and arteritis of remote vessels is therefore lacking, but in this instance its probability is of a very high degree. In his discussion of this case Plaut mentions another one very similar to it.

A typical case of temporal arteritis was described by Chasnoff and Vorzimer.[14] Both the clinical findings and the histologic picture of the resected temporal artery appeared characteristic. The patient apparently made a good recovery from this illness but died in another hospital about a year later of cerebral vascular disease. Postmortem examination is said to have revealed lesions in many other arteries similar to those found in temporal arteritis, but a detailed description of these findings is not at present available. There seems little doubt, however, that this is another example of "generalized" temporal arteritis.

Reference has already been made to several other cases of proved temporal arteritis in which the presence of distant arteritis was suspected but not confirmed.

Nevertheless, on the basis of a few cases in which typical temporal arteritis appears to have existed in association with a similar arteritis involving numerous remote vessels, it is justifiable to believe that this condition is, in some instances at least, part of a generalized arteritis of a little known type.

If this is true its nomenclature, inadequate a priori, must certainly be revised. Kilbourne and Wolff[15] have proposed the more general term "cranial arteritis," but

9. Barnard, W. G.: Tuberculous Arteritis, J. Path. & Bact. **40**: 433-436 (May) 1935.
10. Sproul, E. E., and Hawthorne, J. J.: Chronic Diffuse Mesaortitis, Am. J. Path. **13**: 311-323 (March) 1937.
11. Gilmour, J. R.: Giant Cell Chronic Arteritis, J. Path. & Bact. **53**: 263-277 (Sept.) 1941.
12. Weiss, Soma: Medical Progress: Arteritis: Diseases Associated with Inflammatory Lesions of the Peripheral Arteries, New England J. Med. **225**: 579-584 (Oct. 9) 1941.
13. Sproul, E. E.: A Case of Temporal Arteritis, abstr. New York State J. Med. **42**: 345-346 (Feb. 15) 1942.
14. Chasnoff, J., and Vorzimer, J. J.: Temporal Arteritis: Local Manifestation of Systemic Disease, Ann. Int. Med. **20**: 327-333 (Feb.) 1944.
15. Kilbourne, E. D., and Wolff, H. G.: Cranial Arteritis: A Critical Evaluation of the Syndrome of "Temporal Arteritis" with Report of a Case, Ann. Int. Med. **24**: 1-10 (Jan.) 1946.

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this new name does not take into account cases like those just discussed. A new nomenclature should obviously provide for such "generalized" cases. Therefore, in the absence of any clue as to the etiology of this process, the name "granulomatous arteritis of undetermined cause" is suggested. In individual cases this term should be qualified by the appropriate adjective describing the region or regions believed to be involved, e. g. "cranial," "generalized."

SUMMARY

A comparison of their clinical and pathologic features demonstrates that temporal arteritis is distinct from all well known forms of inflammatory arterial disorders. Furthermore the evidence connecting temporal arteritis with some of the very unusual types of arteritis which have been described is so questionable that a decision concerning their relationship should be withheld. It appears highly probable however that in some instances temporal arteritis is a manifestation of a widespread arteritis of a special type. Therefore the nomenclature of this condition should be revised.

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BILLROTH I (VON HABERER) RESECTION OF THE STOMACH

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In 5 cases which I have encountered, severe gastrointestinal hemorrhages from hemorrhagic and ulcerative gastrojejunitis occurred eighteen to thirty years following gastroenterostomy for congenital pyloric stenosis. Four of the patients were men and 1 was a woman. In all 5 cases after the gastroenteric anastomosis was disconnected and the region of hemorrhagic or ulcerative gastrojejunitis was excised, the opening in the jejunum was closed. Partial gastrectomy was performed with removal of at least half and up to two thirds of the stomach, including the site of the gastroenteric stoma. A Billroth I (von Haberer) type of anastomosis was made between the remainder of the stomach and the duodenum. In the von Haberer modification the entire cut end of the stomach is sutured to the cut end of the duodenum. The circumference of the stomach is decreased by interrupted reefing sutures. Excellent results followed this operation in every case. The first patient was operated on in 1935, the second in 1937. In 1941 both patients were presented before a staff meeting of the Mayo Clinic.[1]

Three interesting points are presented from the standpoint of the diagnosis and the treatment of the condition: 1. Roentgenologic examination of the stomach and jejunum did not reveal any particular abnormality except in 1 case, that of the woman who had a jejunal ulcer. In 1 case (case 4) roentgenologic examination of the gastroenteric stoma approximately eight weeks prior to an acute perforation of a gastrojejunal ulcer revealed nothing abnormal. 2. In two of the cases [1] pylorectomy had been done without benefit. It was only when the gastroenteric anastomosis was disconnected and a partial gastrectomy (Billroth I type) was performed that successful relief from bleeding was obtained. 3. In 2 cases bleeding occurred in spite of a relative achlorhydria and apparently satisfactory function of the gastroenteric stomas. Two other cases of similar type have been reported by Fowler and Hanson [2] and by Stevens and Boeck.[3]

In Fowler and Hanson's case, after the gastroenteric anastomosis was taken down and the jejunal ulcer was excised, pyloroplasty was performed. Enteroanastomosis was necessary twelve days later to relieve an obstruction in the jejunum. One and a half years after the operation the patient was well.

Stevens and Boeck's patient was a man aged 31, who was well one and a half years after disconnection of the gastroenteric anastomosis, removal of the jejunal ulcers and the performance of a Judd pyloroplasty. Stevens and Boeck pointed out that gastroscopies of their patient revealed nothing significant on occasions and therefore that the inflammation and ulceration appear to heal intermittently but the healing is only temporary.

REPORT OF CASES

CASE 1.—A man aged 24 had undergone gastroenterostomy for congenital pyloric stenosis at the age of 5 weeks. Two severe gastrointestinal hemorrhages had occurred, one in May 1926, when he was 15 years of age, and the second in August 1927. He was symptom free except for weakness at the time of the hemorrhages. Roentgenologic examination of the stomach in January 1928 did not reveal a lesion, and the gastroenteric stoma was reported free. A study of the gastric contents by the fractional method (Töpfer's method) revealed total acidity of 30, 20, 22 and 30 at intervals of fifteen minutes after the test meal and free hydrochloric acid of 0, 0, 0 and 6, and 10, 25, 23 and 20 cc. of gastric contents at the same intervals. In 1928 exploration of the gastroenteric stoma elsewhere revealed it in good condition. Pylorectomy was done and the appendix was removed. The patient was well from 1928 to 1930. In 1930, 1932 and May 1933 he had intestinal hemorrhages. In November 1934 he vomited approximately 1 quart (1,000 cc.) of blood. This was repeated in January 1935.

On June 7, 1935 gastroscopy at the Mayo Clinic showed atrophic mucous membrane at the upper end of the stomach but no ulceration. Gastric analysis by the fractional method on June 4, 1935 showed total acidity of 20, 16 and 12 units (Töpfer's method), free hydrochloric acid of 8, 4 and 0 and total contents of 30, 12 and 23 cc. Roentgenologic examination of the stomach showed that the pyloric end of the stomach had been removed, and a free anastomosis without evidence of recurrence of the ulcer. On June 17, 1935 partial gastrectomy was performed after disconnection of the gastroenteric stoma and excision of the region of hemorrhagic gastrojejunitis. A Billroth I type anastomosis was carried out. The pathologist reported cystic polypoid hyperplasia of the gastric portion of tissue removed. The patient had an uneventful convalescence. In 1938 the patient was in excellent condition.

On May 14, 1944, after playing tennis and having a party in the evening, he was awakened with nausea for the first time in nine years. He vomited blood and continued to bleed for several days and had tarry stools. The concentration of hemoglobin dropped to 30 per cent and the prothrombin time was 120 seconds. The patient was given repeated transfusions, plasma and vitamin K. Following the transfusions his blood count returned to normal and he was symptom free. He was reexamined at the clinic on June 24, 1944. His blood count was normal. Roentgenologic examination of the stomach and small intestine showed the Billroth I type of anastomosis to be functioning in a satisfactory manner. There was no evidence of lesion in the stomach, jejunum or upper part of the esophagus. Gastroscopy disclosed hypertrophic gastritis involving the upper half of the stomach. The gastroduodenal

From the Division of Surgery, Mayo Clinic.

1. Walters, Waltman: Partial Gastrectomy (Billroth I) for Hemorrhagic Gastrojejunitis Following Previous Gastroenterostomy for Congenital Pyloric Stenosis: Report of 3 Cases, Proc. Staff Meet., Mayo Clin. **16**: 321-323 (May 21) 1941.

2. Fowler, L. H., and Hanson, W. A.: Gastrojejunal Ulcer Following Gastroenterostomy Performed Twenty-Four Years Before for Pyloric Stenosis of Infancy, Minnesota Med. **23**: 602 (Aug.) 1940.

3. Stevens, G. A., and Boeck, W. C.: Gastrojejunal Hemorrhage Following Gastroenterostomy for Hypertrophic Pyloric Stenosis of Infancy, J. A. M. A. **124**: 160-161 (Jan. 15) 1944.

anastomosis appeared normal and without ulceration. Gastric analysis revealed total acidity of 34 (Töpfer's method), free hydrochloric acid of 20 and a total of 75 cc. of gastric contents. He has had no further trouble and was in excellent condition when last heard from.

CASE 2.—A man aged 22 when he registered at the Mayo Clinic on Nov. 30, 1936 had had a posterior gastroenterostomy performed elsewhere for congenital pyloric stenosis when he was 8 weeks of age. In 1931 he had hematemesis and weakness, with tarry stools. The concentration of hemoglobin dropped to 27 per cent. A similar recurrence took place four years later. At that time he was operated on elsewhere and a duodenal polyp was excised from the first part of the duodenum and with it the pyloric end of the stomach. Following this operation he was well for ten months. He then vomited approximately 1 pint (500 cc.) of blood, and the hemoglobin decreased to 55 per cent.

Physical examination at the clinic shortly after this episode was negative. Blood count and urinalysis were normal. Gastric analyses revealed total acidity of 8 one hour after a test meal, 8 one and a fourth hours after it, 10 one and a half hours after it and 10 one and three-fourths hours after it. Free hydrochloric acid at the same intervals after the test meal was 0, 0, 0 and 0. The total quantity of contents at the same intervals was 40, 8, 18 and 80 cc. Analysis of gastric contents at intervals of ten minutes after injection of histamine gave 24, 40, 66, 84, 66, 62 and 66 total acid and 16, 34, 58, 78, 60, 54 and 58 free hydrochloric acid, the quantity being 24, 22, 42, 30, 43, 32 and 30 cc.

On Dec. 1, 1936 a roentgenologic examination of the stomach revealed that the pyloric half had been removed and that the anastomosis was free. On December 4 another roentgenogram of the stomach showed some hypertrophy of the gastric mucosa and considerable irritability of the stomach and anastomotic portion of the jejunum.

On Jan. 12, 1937 operation for disconnection of the gastrojejunal anastomosis and excision of the region of the gastrojejunitis was done. After the opening in the jejunum had been closed, the end of the stomach was anastomosed to the end of the duodenum which had been incised and a Billroth I (von Haberer) type of anastomosis was performed. A temporary jejunostomy was done for feeding. The pathologist reported gastrojejunitis with a gastric diverticulum 1 cm. deep. Convalescence was uneventful.

The patient was well until March 28, 1943, when he vomited blood after irregularities of diet and some overindulgence in alcohol. There was a decrease in the concentration of hemoglobin to 55 per cent and the blood pressure fell to 80 mm. of mercury systolic and 70 diastolic. After a transfusion of blood he was placed on an ulcer regimen and immediately recovered. He has had no further bleeding but is careful of his diet and refrains from taking alcoholic beverages and from smoking.

CASE 3.—A woman aged 18 who came to the clinic on Aug. 16, 1928 had a history of having had gastroenterostomy for congenital pyloric stenosis when she was 28 days old. In March 1928, eighteen years later, she had melena followed by two weeks of gastric distress simulating that of chronic peptic ulcer. Anemia and prostration accompanied the episode. Roentgenograms of the stomach made elsewhere showed a marginal ulcer. She was placed on an ulcer regimen.

At the time of admission to the clinic there were no symptoms of ulcer. Gastric analysis showed a total acidity of 12 one hour after a test meal, 14 fifteen minutes later and 28 thirty minutes later and free hydrochloric acid of 0, 6 and 10 at the same time. The quantity of gastric contents was 30, 20 and 40 cc.

Another massive hemorrhage occurred in November 1939. Gastroscopy at the clinic revealed several small areas of superficial erosion at the stoma. On roentgenologic examination Nov. 29, 1939 the gastrojejunal stoma was functioning freely and the pylorus was not patent. On May 27, 1940 the patient's condition was the same. The value for hemoglobin was 10.5 Gm. per hundred cubic centimeters and erythrocytes numbered 4,370,000 per cubic millimeter of blood. On Oct. 14, 1940, after disconnection of the gastroenteric stoma, a partial gastrectomy with a Billroth I type of anastomosis was performed. Palpable and visible hypertrophy of pyloric muscle was noted, which covered part of the pylorus 3.5 to 4 cm. in length and 3 cm. in thickness. A small gastrojejunal ulcer was present at the juncture of the proximal loop of jejunum and stomach with hemorrhagic gastrojejunitis. The pathologic report showed in addition to the ulcer chronic gastrojejunitis, hypertrophy of pyloric muscle and lining mucous membrane in the region of the pylorus.

The patient had an uneventful convalescence from her operation. She returned to the clinic on Oct. 26, 1943 and stated that she had been entirely well since the operation.

CASE 4.—A man aged 29 who entered the clinic on July 24, 1941 had had a gastroenterostomy for congenital pyloric stenosis when 5 weeks of age. In 1939 after a short period of epigastric distress he vomited blood. There were no symptoms of ulcer. Six months later roentgenograms of the stomach made elsewhere showed pyloric obstruction. In the summer of 1940, after considerable physical activity, he had abdominal pain and a few tarry stools.

On examination at the clinic in the summer of 1941 there was no decrease in the level of hemoglobin, and blood counts and urine were normal. Analysis of the gastric contents one hour, one and a fourth, one and a half and one and three-fourths hours after a test meal revealed total acidity of 10, 6, 6 and 20, free hydrochloric acid of 0, and 35, 15, 20 and 50 cc. of gastric contents. A roentgenogram of the stomach on Aug. 25, 1941 showed that the gastroenteric stoma was free and no barium was passing through the pylorus. Two months later the patient had an acute perforating gastrojejunal ulcer, which was repaired elsewhere. He had no further symptoms subsequently.

The patient returned to the clinic, and removal of the gastroenteric anastomosis and resection of the stomach were done on Dec. 19, 1941. A Billroth I type of anastomosis was performed. At operation gastrojejunitis was found in the region of the stoma. The degree of hypertrophy present in the pyloric end of the stomach was remarkable; it extended up for a distance of 2.5 cm. The muscle was 1.8 cm. thick. The pathologist reported gastrojejunitis, the edge of a healed perforating gastrojejunal ulcer, gastritis grade 2 (on a grading basis of 1 to 4) with thickening of pyloric musculature and narrowing grade 3 + of the outlet of the stomach. Convalescence was uneventful. On April 9, 1942 the patient stated that he was in excellent condition.

CASE 5.—A naval officer aged 30, who presented himself at the United States Naval Hospital in Philadelphia on Nov. 18, 1945, stated that a gastroenterostomy had been performed on him for pyloric stenosis when he was an infant. He had been free from symptoms until April 1943, when he had a severe gastrointestinal hemorrhage while on duty with the navy in the Pacific area. He was then symptom free until August 1945, when he had another gastrointestinal hemorrhage. He entered the hospital because of these hemorrhages. He brought roentgenograms with him which showed a malfunctioning gastroenteric stoma with considerable dilatation of the loop of the jejunum proximal to the anastomosis. A diagnosis of gastrojejunitis and malfunctioning gastroenteric anastomosis was made.

Operation was performed by Captain Hays and me at the United States Naval Hospital in Philadelphia on Nov. 19, 1945. The distal loop of jejunum was found to be adherent to the anterior portion of the anastomosis. This position gave the distal loop the appearance in the roentgenogram of being a proximal loop. The actual proximal loop of jejunum forming the anastomosis was not appreciably long nor was it appreciably dilated. There was a scar in the jejunum which was suggestive of a healed jejunal ulcer; this scar was located about 1.5 cm. beyond the anastomosis. At the site of the anastomosis there was some evidence of gastrojejunitis, and in one place on the anterior wall a small ulcer was present. The jejunum was detached from the stomach; the opening of the stomach was closed and the opening in the jejunum was closed transversely. The lower half of the stomach was removed and with it the hypertrophied pyloric sphincter, which was about three to four times normal thickness. The end of the stomach was sutured into the end of the duodenum in a Billroth I (von Haberer)

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type of anastomosis. The posterior and anterior wall and angles of the stomach were protected with omentum. No stones could be felt in the gallbladder, which emptied readily.

Postoperative progress was uneventful. A study of gastric acidity on December 3 at intervals of fifteen minutes after a test meal showed a total combined acidity of 25, 30, 30 and 35 and a free hydrochloric acid of 0, with 40, 15, 15 and 15 cc. of gastric contents.

Pathologic examination by Comdr. R. H. Fisher revealed hypertrophy of the pyloric musculature. The lumen of the pylorus was reduced to a dimension of 2 mm. On section through the pylorus, thickening of the submucosal fibrous tissue was evident just proximal to the duodenum and the submucosal blood vessels were prominent.

COMMENT

In 3 of the 5 cases of hemorrhagic and ulcerative gastrojejunitis after gastroenterostomy for congenital pyloric stenosis reported in this paper cures followed removal of the gastroenteric anastomosis, resection of the stomach and the Billroth I (von Haberer) type of anastomosis between the proximal end of the stomach and the duodenum. In 2 cases hemorrhages occurred six and nine years respectively after this procedure. In 1 case it followed overindulgence in food and in stimulants and gastric irritants. No further bleeding has occurred since the patient began to abstain from the use of alcoholic beverages. Both patients were well when last heard from.

Two of the patients had undergone pylorectomy after bleeding occurred without relief. Bleeding ceased after the gastroenteric anastomosis was taken down and partial gastrectomy was performed.

In 2 cases severe gastrointestinal hemorrhages apparently occurred in the presence of a relative achlorhydria.

In 1 case a gastrojejunal ulcer perforated seven weeks following a thorough examination in which the patient was found to have a relative achlorhydria and findings on roentgenologic examination indicated that the gastroenteric stoma was functioning normally.

In only 1 case was a definite jejunal ulcer demonstrated by roentgenologic examination. In this case there had been definite symptoms of ulcer previously, but these had responded to the medical regimen.

In patient 5, a naval officer operated on at the United States Naval Hospital, Philadelphia, the roentgenogram seemed to show a malfunctioning gastroenteric stoma with dilatation of the proximal loop of jejunum. At operation this dilatation was not found. Excellent results have followed removal of the gastroenteric stoma, closure of the opening in the jejunum and partial gastrectomy with Billroth I (von Haberer) anastomosis.

Most Famous Surgeon of Ancient China.—Hua Tu (A. D. 115-205) was the most famous surgeon of ancient China. To him is attributed the discovery of anesthesia, as he gave his patients a narcotic draft believed to be Cannabis indica before operating on them. His operations included laparotomy and excision of the spleen, but we know nothing of his methods, as none of his books have survived. Hua Tu had a great reputation, which continued after his death, and even in recent times effigies of him might be seen in certain temples. He was one of those who made a profound study of the pulse, a method of examination which is very prominent in Chinese medicine. Two hundred varieties of pulse have been described, and it is believed that any internal disease may be diagnosed from the pulse alone. Several hours may be spent in the investigation, the pulse being felt at many different places.—Guthrie, Douglas: A History of Medicine, Philadelphia, J. B. Lippincott Company, 1946.

LEPTOSPIRAL NEPHRITIS

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A leptospiral infection is seldom considered in the differential diagnosis of an acute febrile illness in the absence of jaundice. Several forms of the infection are described, however, in which jaundice is lacking —among them a primary renal or nephritic type. Instances of this "pure" renal form of leptospirosis are fairly common abroad,[1] but prior to this report no cases have been recognized in the United States.

Two patients observed in Rochester, N. Y., are the first confirmed instances of anicteric leptospiral nephritis to be reported in this country.

REPORT OF CASES

CASE 1.—E. W. Z., a schoolboy aged 17, taken ill on the evening of July 27, 1939, displayed considerable anxiety, perspired profusely, vomited several times and complained of a severe backache. His temperature was elevated to 103 F. (39.4 C.). The next morning abdominal distress and diarrhea became prominent and he complained of headache and diffuse pains. He was alternately chilly and feverish. When seen by his family physician a diagnosis of influenza was suggested.

The patient seemed to improve slightly until the fourth day of illness, when the picture become that of a sepsis and the temperature was elevated to 104 F. (40 C.). He become irrational and exhibited frank chills and photophobia. Typhoid was suspected and hospitalization was advised. He was admitted to the Rochester General Hospital on the fifth day of illness under the services of Dr. J. D. Goldstein.

Previously the patient had been in excellent health, and a transient sore throat about a week before the present illness was the only prodromal symptom. He had been swimming almost daily in the Erie Barge Canal near Pittsford, N. Y., and although the canal was known to be infested with rats he was not aware of any direct contact with the rodents. He was aware that water had entered the upper respiratory passages on several occasions.

Physical examination on admission to the hospital revealed a temperature of 102.2 F. (39 C.), a pulse rate of 80 beats per minute, a respiratory rate of 24 per minute and a blood pressure of 110 mm. of mercury systolic and 52 mm. diastolic. The patient was well developed and well nourished and appeared to be acutely ill and prostrated. The skin was hot and dry, and two crusted furuncles were present on the right forearm. No significant lymphadenopathy was observed. There was a slight conjunctival injection, moderate photophobia and a little dried secretion about the eyelids, but no edema or puffiness. The mucous membranes of the nose were congested, but there was no other physical or x-ray evidence of upper respiratory infection. The neck was supple. The lungs were normal. The heart was of normal size, rate and rhythm; no murmurs were heard. The abdomen was diffusely tender, and one observer thought he felt the tip of the spleen. The genitalia were normal. All reflexes were physiologic. The soft tissues of the flanks and extremities were tender.

Before laboratory data were available, the diagnoses suggested were influenza, typhoid, rheumatic fever and undulant fever. When albumin, pus and red blood cells were found in the urine, a diagnosis of acute glomerulonephritis was made.

Results of examinations of the blood and urine on the respective days of illness are shown in table 1.

From the Departments of Bacteriology and Medicine of the University of Rochester School of Medicine and Dentistry.

1. Ameuille, M. P.: Néphrite aigue avec ictère et spirochétose ictéro-hémorragique, Bull. et mém. Soc. méd. d. hôp. de Paris **40**: 2281-2285 (Dec. 22) 1916. Celice, J., and Albeaux-Fernet, M.: Forme rénale pure de spirochétose (rapports possibles avec les néphrites de guerre), Ann. de méd. **38**: 70-78 (June) 1935.

During the hospital stay, repeated examinations of the blood showed that the hemoglobin value of 85 per cent (11.7 Gm. per hundred cubic centimeters) decreased to 77 per cent. The count of white cells increased from 7,600 to 14,000, of which from 76 to 82 per cent were neutrophils. On the seventh day of illness the blood sedimentation rate was increased (1.85 mm. per minute). On the ninth day the bleeding time was three and one-half minutes (normal one to three minutes) and the coagulation time was six and one-half minutes (normal two to six minutes).

TABLE 1.—*Laboratory Data for Case 1*

Material Test	Day of Illness 5	8	12	16	19
Urine					
Specific gravity	1.018	1.016	....	1.006	1.014
Albumin	1+	1+	....	Trace	Trace
Leukocytes	Occasional	Few	....	None	Rare
Erythrocytes (per high power field)	Many	Many	....	None	2-5
Casts	.....	Some granular and cellular	....	.....	Occasional hyaline and granular
Blood *					
Nonprotein nitrogen	150.0	80.0	34.0	.....	33.0
Urea nitrogen	86.0	50.0	20.0	.....	15.0
Creatinine	5.2	2.8	2.1	.....	2.0
Uric acid	.....	5.8	2.7	.....	3.2
Chlorides	.....	412.0	429.0	.....	429.0

* All determinations recorded in milligrams per hundred cubic centimeters.

On the seventh day of illness the severe headache was finally relieved by a lumbar puncture. The spinal fluid was sterile, under normal pressure and dynamics and examination revealed that there were 6 cells, the Pandy test for globulin was negative, the protein level was 39.3 mg. per hundred cubic centimeters, that of sugar was 71 mg. per hundred cubic centimeters, and the chlorides measured 677 mg. per hundred cubic centimeters.

Repeated bacteriologic studies were made while the patient was in the hospital and also on the one hundred sixty-sixth day after the onset of his illness. No bacterial pathogens were identified in the throat, urine, stool, blood or spinal fluid. Serologic tests with Eberthella typhosa, Salmonella paratyphi A, Salmonella schottmülleri (paratyphi B), Brucella abortus and Brucella melitensis and sheep erythrocytes were repeatedly negative. The blood Wassermann and Kahn tests were also negative.

Convalescence after the ninth day of illness was uneventful except for several small, spontaneous epistaxes. The intake of fluids between the seventh and thirteenth days ranged from 1,640 to 3,980 cc. daily, and the output of urine ranged from 950 to 2,250 cc. The body weight was 116 pounds (52 Kg.) on the seventh day, 118 pounds (53 Kg.) on the twelfth, and 120 pounds (54 Kg.) on the nineteenth—an increase in spite of a febrile illness. At no time, however, was there evidence of edema or was jaundice or a change in blood pressure observed. Following his discharge from the hospital on the nineteenth day after the onset of his illness the patient remained in bed at home for five weeks and returned to school two weeks after that. He remained weak and noticed that his hair was falling out excessively. Aside from a high protein, salt free diet, treatment throughout was symptomatic.

The possibility of a leptospiral infection was suggested by the history of bathing in rat infested water. Blood from the patient on the eighth day of illness was injected into a guinea pig, which survived without any evidence of infection. Serum obtained on the twenty-second day after the onset of illness was found to have a titer of 1:15,000 against an antigen of Leptospira icterohemorrhagiae. More serum obtained on the twenty-sixth day had the same titer, and that taken on the one hundred and sixty-sixth day had a titer of 1:600. The antigen used in these tests was a living culture of the spirochetes obtained from a patient who died of Weil's disease (K strain), and the technic employed was that of dark field examination of a microscopic agglutination. Guinea pigs were protected by all three specimens of the patient's serum against the same strain of the organisms.

CASE 2.—C. D. G., a married man aged 61, a dairy worker, was in good health until the morning of Sept. 13, 1939. The onset of his illness was abrupt, and he was forced to leave his work and return home. Prominent symptoms were chills and fever, profuse diaphoresis, severe headache, photophobia and weakness. Intestinal grip was the diagnosis mentioned by the family physician, who saw him the next day. Abdominal distress and diarrhea were experienced during the ensuing three days; typhoid was suspected, and hospitalization was advised. He entered Strong Memorial Hospital on the sixth day of illness under the services of Dr. L. A. Kohn. Because of his grave condition he was placed on the danger list.

The patient had been in good health most of his life except for the usual childhood diseases, an infectious jaundice in 1908, a febrile illness of unknown etiology lasting four weeks in 1915, mild pleurisy in 1937 and several minor injuries. His attack of jaundice was said to have been characterized by digestive disturbances and abdominal pain accompanied by transient fever. It lasted but two weeks and appeared to be one of several cases in the family and neighborhood.

For the past several years the patient had worked in a milk pasteurizing plant in Pittsford, N. Y. He said that rats were frequently seen about the plant and that approximately three weeks before this illness one of them had become caught in the mechanism of a bottle washer, and its macerated tissues had been thrown about and over him. He usually wore rubber boots at work because of wet floors.

Physical examination on admission to the hospital revealed a temperature of 102.7 F. (39.2 C.), a pulse rate of 78 beats per minute, a respiratory rate of 22 per minute and blood pressure of 120 mm. mercury systolic and 80 mm. diastolic. The patient was well developed and well nourished and appeared critically ill. He complained of abdominal pain and general discomfort. The skin was hot and dry. There was no significant lymphadenopathy. The pupils were normally reactive both to light and during accommodation, and the fundi showed arteriosclerotic changes but no hemorrhages or exudates. The membranes of the nasopharynx were congested, dry and crusted. There was complete adentia and herpes labialis. The neck was supple. A few dry rales were heard at the base of the left lung, but no other significant conditions were evident in the chest. The heart sounds were distant, but the rhythm was regular and no murmurs were heard. The abdomen was slightly tender and distended. The prostate was moderately hypertrophied. There was no evidence of edema.

TABLE 2.—*Laboratory Data for Case 2*

Material Test	Day of Illness 6	9	10	13	21
Urine					
Albumin	Trace	.....	Trace	1+	None
Leukocytes	.....	.....	None	.....	None
Erythrocytes	Many	.....	None	.....	None
Casts	Many	.....	Many	Many	None
Blood *					
Nonprotein nitrogen	.....	122.0	98.0	64.0	40.0
Urea nitrogen	.....	.....	.....	.....	20.9
Creatinine	.....	5.9	3.6	2.2	.....
Chlorides	.....	516.0			

* All determinations recorded in milligrams per hundred cubic centimeters.

Typhoid or a gastroenteritis was held to be the most likely diagnosis until the results of urinalysis suggested a diagnosis of nephritis.

The results of examinations of the blood and urine on the respective days of illness are shown in table 2.

During hospitalization the hemoglobin content fell from 13.0 to 11.4 Gm. per hundred cubic centimeters and the number of white cells increased from 7,000 to 11,400, of which from 83 to 90 per cent were neutrophils. On the twentieth day a phenolsulfonphthalein test showed an excretion of 5 per cent of the dye in fifteen minutes, 25 per cent in the second fifteen minutes, 20 per cent in the next half hour and 25 per cent in the second hour—a total of 75 per cent in the two hour period. A blood

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urea clearance test done on the twenty-fourth day showed a standard clearance of 48.5 per cent of normal in the first hour and 55 per cent in the second hour.

X-ray examination of the chest on the twelfth day of illness showed a slightly enlarged heart but no abnormalities in the lungs. That of the abdomen revealed degenerative changes in the lumbar spine but no significant abnormalities in the intestinal and urinary tracts. An electrocardiogram on the twenty-first day was interpreted as left axis deviation, with a PR interval of 0.19 second.

Repeated bacteriologic studies were made during hospitalization and on the one hundred and third day after the onset of the illness. No bacterial pathogens were found in the blood, urine or stool. Serologic tests with E. typhosa, S. paratyphi A, S. schottmülleri (paratyphi B), Br. abortus and Br. melitensis and sheep erythrocytes were repeatedly negative. The blood Wassermann and Kahn tests were also negative.

Fever persisted until the sixteenth day of illness. Malaise, headache, gastric distress, abdominal pain and myalgia continued meanwhile. Loose stools occurred several times daily, and there was occasional incontinence of both urine and feces. No rose spots, edema or jaundice were evident at any time. The intake of fluids was 2 or more liters daily. Treatment was symptomatic. Convalescence after discharge from the hospital was not remarkable; the patient remained in bed two weeks at home and returned to work approximately two months after the onset of illness.

A leptospiral infection was considered only in retrospect. Serum obtained from the patient on the forty-third day after the onset of illness was found to have a titer of 1:75,000 against an antigen of L. icterohemorrhagiae, and that taken on the one hundred and third day had a titer of 1:600. Guinea pigs were protected by both specimens of the patient's serum against the K strain of L. icterohemorrhagiae.

Animal protection tests were carried out with young white guinea pigs weighing about 200 Gm. Serial dilutions of the patient's serums were made in living cultures of the organism, and 0.5 cc. quantities of the mixture were injected intraperitoneally into the test animal. A total of 60 guinea pigs were used in testing the serums from both patients. With 1 exception it was found that 0.025 cc. of each serum protected the guinea pig from 0.5 cc. of the culture of L. icterohemorrhagiae—an amount calculated to be 10,000 times the minimum lethal dose. The mortality among unprotected guinea pigs used as controls was 100 per cent.

COMMENT

Evidence of damage to the kidneys is an important manifestation of all types of leptospiral infections. Although signs and symptoms may suggest sepsis, meningitis, pneumonitis, gastroenteritis or hepatitis, the results of urinalysis are usually abnormal. Occasionally the dominant signs and symptoms are those associated with an acute nephritis. Thus, a leptospiral infection should be considered in the differential diagnosis of any acute illness of obscure etiology if there are abnormal urinary observations, particularly if the occupation or the history of the patient discloses contact with rat excreta.

Renal disease is more common in some of the reported series of leptospiral infections than is jaundice itself. For example, among 232 patients with the disease in Amsterdam 109 (46 per cent) were anicteric, while 41 (17.5 per cent) gave no evidence of nephritis.[2] As expected, abnormal urinary findings were more numerous in the jaundiced patients, for only 11 per cent of 123 jaundiced patients had no apparent involvement of the kidneys while 25 per cent of 109 anicteric patients had none. In another series[3] albuminuria was present in practically every one of 40 patients, and in all the patients who were moderately or severely ill damage to the kidneys was further indicated by the presence of epithelial cells, leukocytes, erythrocytes and casts. Among rats it is noteworthy that most of the animals whose excreta contain leptospirae have no evidence of disease other than the renal infection. Of 9 dogs with leptospiral nephritis 8 were anicteric. A nephritis without jaundice which resulted in uremia and death was produced experimentally in dogs.[4]

Nephritis as evidenced by the abnormal results of examination of the blood and urine is not only of diagnostic value but it is also of prognostic significance. Some degree of albuminuria, hematuria and cylindruria is usual. Urobilin is nearly always found in the urine, often in large quantities, and when jaundice is present bilirubin may also be found. Hay's reaction may be positive even when there is no clinical evidence of jaundice.[5] Oliguria and anuria are common in severe cases. Of 106 icteric patients in the Amsterdam series [2] 38 were oliguric and 10 anuric. Of the 34 fatalities in this series, 29 were oliguric and 10 anuric. Oliguria was present in only 5 of the 95 patients without jaundice. In the same series the blood urea nitrogen ranged (depending on the phase of the disease) between 200 and 600 mg. per hundred cubic centimeters in the 19 patients who died and between 30 and 360 mg. in the 17 icteric patients who recovered. The concentration was less than 30 mg. per hundred cubic centimeters in the 13 anicteric patients. The prognostic significance of retained urea was pointed out as early as 1917.[6] Death resulting from the severe form of leptospiral infection (Weil's disease) is usually attributable to the impairment of renal function.

The excretion of virulent strains of Leptospira in the urine is usual in all types of infection due to the organism. This fact is of paramount importance because the disease is propagated by urine which is infected. In the form of the disease which affects man, leptospirae may be detected in the urine as early as the sixth day [7] but are said to reach a maximum about the sixteenth day and may persist for a period of weeks. In 1 of our severer cases, leptospirae were recovered from the urine by guinea pig inoculation on the seventy-seventh day after the onset of the patient's illness. At this time the patient had already returned to work. In other instances leptospirae have been recovered from the urine as late as the one hundredth and one hundred and third days,[8] the fifth month,[9] the thirty-third week [10] and the end of a year.[2] Davidson and Smith [11] concluded, however, that virulent leptospirae could not be recovered with certainty at any given time during the course of an illness. In their examination of 211 specimens of urine in 88 cases of proved leptospiral infection organisms were not recovered from any specimens before the seventh day. The results of 19.3 per cent were positive between the eighth and fourteenth days, 21.5

2. Walch-Sorgdrager, B.: Leptospiroses, Bull. Health Organ., League of Nations **8:** 143-386, 1939.
3. Davidson, L. S. P., and Smith, J.: Weil's Disease in Fish Workers: A Clinical, Chemical and Bacteriological Study of 40 Cases, Quart. J. Med. **5:** 263-286 (April) 1936.
4. Monlux, W. S.: Personal communication to the authors.
5. Rimbaud, L.; Janbon, M., and LaBraque-Bordenave: Deux cas atypiques de spirochétose ictéro-hemorragique: formes anictériques (pseudo-grippale et meningo-renale), Bull. et mém. Soc. méd. d. hôp. de Paris **53:** 610-615 (May 17) 1937; abstr., Trop. Dis. Bull. **34:** 705 (Sept.) 1937.
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7. Elton, N. W.: Spirochetal Jaundice in Buffalo, Am. J. Clin. Path. **9:** 219-225 (March) 1939.
8. Garnier, M., and Reilly, J.: Les formes prolongées de la spirochétose ictérigène: form rénale et forme hépato-splénique, Bull. et mém. Soc. méd. d. hôp. de Paris **41:** 711-717 (Aug.) 1917.
9. Slot, G. A., and van der Walle, N.: Leptospirosen in Bangkinang en imgeving, Geneesk. tijdschr. v. Nederl.-Indië **72:** 1579-1597 (Nov. 8) 1932.
10. Murgatroyd, F.: Chronic Meningitis in Weil's Disease, Brit. M. J. **1:** 7-11 (Jan. 2) 1937; **1:** 445-446 (March 4) 1939.
11. Davidson, L. S. P., and Smith, J.: Weil's Disease in the North-east of Scotland: Account of 104 Cases, Brit. M. J. **2:** 753-757 (Oct. 14) 1939.

per cent were positive between the fifteenth and twenty-first days, 9.5 per cent were positive between the twenty-second and twenty-eighth days, and after that time the results were all negative. The "shedder state" in dogs is considered to persist for a matter of weeks, and rats are probably chronic carriers for a longer time.[12]

The presence of leptospirae in the urine may be obscured by certain constituents of the urine which exert a lethal effect on the spirochetes. Among these are bile, bile salts, specific agglutinins, lysins and protective antibodies. In the urine an agglutinin titer of 1:256 was found in 1 instance[13] and a titer of 1:300 in 2 other cases.[11]

In a series[11] of one hundred observations from 52 cases of proved leptospirosis, agglutinins were positive in 16⅔ per cent of the urine specimens during the first week of illness, in 71.4 per cent during the second week, in 91.8 per cent during the third week and in 100 per cent after the third week. If the reaction of the urine is too acid, the leptospirae will also be destroyed. In one experiment,[3] leptospirae were added to 13 samples of normal urine; they survived for six hours or more in only 1 of 5 specimens having a p_H of 5.4 or less but survived a similar period in 5 of 8 specimens having a p_H of 5.5 or more. We have adjusted normal urine to various p_H values and added known cultures of the spirochetes to each. After an hour, distorted nonmotile leptospirae were observed in specimens having a p_H of 5.4 or less, and these proved noninfective for guinea pigs.

The efficacy of urinary antiseptics in destroying leptospirae has not been well established. Experiments with methenamine and azosulfamide have given no definite results in dogs.[2] Bismuth oxychloride and the thiosulfate of gold and sodium have been found effective in mice.[14] A ketogenic diet which produces an acid reaction of the urine may be recommended on theoretical grounds; similarly, preparations containing mandelic acid might be tried. Immune serum, although somewhat effective in the systemic disease, apparently has little influence on the excretion of leptospirae in the urine.[15] Satisfactory tests with the sulfonamides and penicillin have not been reported.

Pathologic observations in the kidneys in fatal cases of leptospiral infection are those of a focal interstitial nephritis. Cloudy swelling is evident, for the organs are soft and enlarged and the capsule is stretched tensely. There may be small hemorrhages under the capsule into the interstitial tissue or into the tubules. The cut surface of the tissue is usually pale and bile stained. Glomeruli are not often conspicuously involved. Epithelial cells of the proximal convoluted tubules are swollen, degenerated or even necrotic. Granular and bile containing casts are common within the lumens. There are scattered foci of interstitial infiltration, consisting chiefly of lymphocytes, with smaller numbers of polymorphonuclear leukocytes and eosinophils.[16]

Silver stained preparations of the kidneys contain numerous opaque, black leptospirae in sharp contrast to the pale yellow of the surrounding structures. The organisms are most numerous in the cells and lumens of the tubules; a few are scattered in the interstitial spaces. Cellular infiltration is not a conspicuous trait of the leptospirae. The damage to the kidneys is said to be of toxic origin and caused by the leptospirae—not by the bile.[17] It is of historical interest that Stimson[18] described leptospiral forms in the kidney of a patient who died during a yellow fever epidemic in New Orleans in 1905 and thus identified the first proved case of leptospirosis. The correct interpretation of his observations, however, has been realized only in retrospect.[19]

SUMMARY

Evidence of damage to the kidneys in leptospiral infections is frequent and important—occasionally the predominent manifestation of the disease. Two cases of leptospiral nephritis have been observed in Rochester, N. Y. and are the first examples of this anicteric form of the infection which have been recognized in the United States. Jaundice was not observed in either of the patients.

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15. Inada, R.; Ido, Y.; Hoki, R.; Ito, H., and Wani, H.: The Serum Treatment of Weil's Disease (Spirochetosis Icterohemorrhagica), J. Exper. Med. **24:** 485-496 (Nov.) 1916. Kaneko, R., and Okuda, K.: Distribution of Spirocheta Icterohemorrhagiae in the Organs After Intravenous Serum Treatment, ibid. **27:** 305-308 (April) 1918.

16. Beitzke, H.: Ueber die pathologische Anatomie der ansteckenden Gelbsucht (Weil'sche Krankheit), Berl. klin. Wchnschr. **53:** 188-191 (May) 1916.

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18. Stimson, A. M.: Note on an Organism Found in Yellow Fever Tissue, Pub. Health Rep. **22:** 541 (June) 1907.

19. Sellards, A. W.: The Interpretation of (? Spirocheta) Interrogans of Stimson (1907) in the Light of Subsequent Developments, Tr. Roy. Soc. Trop. Med. & Hyg. **33:** 545-548 (March) 1940.

From the Fourth Medical (New York University) Division, Bellevue Hospital.

1. State, D., and Wangensteen, O. H.: Procaine Intravenously in Treatment of Delayed Serum Sickness, J. A. M. A. **130:** 990-995 (April 13) 1946.

Clinical Notes, Suggestions and New Instruments

A CASE OF SERUM SICKNESS TREATED WITH PROCAINE INTRAVENOUSLY

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In a recent paper State and Wangensteen[1] reported on the use of procaine intravenously in the treatment of delayed serum sickness. Their report was based on a small series of cases, which included only 1 instance associated with antitetanus serum. It seemed worth while, therefore, to record an additional case of serum sickness attending the use of tetanus antitoxin, in which the procaine therapy was employed successfully.

REPORT OF CASE

C. S., a youth aged 16, was admitted to Bellevue Hospital on April 16, 1946, with the chief complaint of inability to open his mouth of three hours' duration. The patient stated that on April 7 he punctured the thenar eminence of his left hand with a knife. He went to a hospital on April 8 and received a prophylactic dose of tetanus antitoxin. On April 14 he noted red streaks over his left arm and forearm and a tender lump in the left axilla. The following day a rash appeared on his trunk and extremities. On April 16, the day of admission, the patient developed stiffness of the extremities, muscle twitching and inability to open his mouth.

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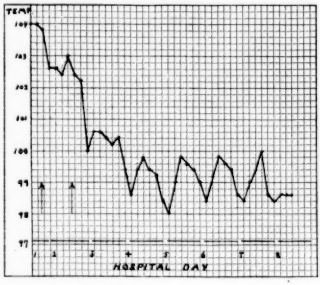
On examination he appeared acutely ill. The temperature was 104 F., the pulse rate 88 and the respiratory rate 30. The lungs were clear and the heart appeared normal. His blood pressure was 100/58. The spleen was felt just below the costal margin. Occasional fibrillary muscle twitchings were noted. There was, however, no muscle spasm. Many joints were painful, tender and swollen, resulting in decided limitation of motion. The arthropathy involved not only the joints of



Effect of procaine hydrochloride on fever associated with serum sickness. At the points indicated by the arrows 1 Gm. was administered intravenously.

his extremities but also the cervical spine and both temporomandibular articulations. Involvement of the last named joints accounted for the inability to open his mouth. Other findings of importance included the presence of a generalized lymphadenopathy and a scattered erythematous and urticarial skin eruption. The neurologic examination was entirely negative.

The white blood cell count was 8,150, with 81 per cent polymorphonuclears, 2 transitionals, 13 lymphocytes and 4 eosinophils. The blood Wassermann reaction was negative and the blood culture sterile. A spinal tap yielded a clear fluid which showed 5 cells, mononuclears, 45 mg. of protein per hundred cubic centimeters, 71 mg. of sugar per hundred cubic centimeters and no organisms by smear and culture.

At first the presence of tetanus was suspected. However, it was soon evident that the patient suffered from delayed serum sickness and that the inability to open his mouth was not due to trismus but to temporomandibular arthritis.

Procaine therapy was instituted about five hours after admission. One Gm. of procaine hydrochloride diluted with 500 cc. of isotonic solution of sodium chloride was administered intravenously over a period of two hours. By the time the infusion was completed the patient was able to move his extremities and open his mouth with a fair degree of comfort, as a result of the rapidly receding arthralgia. Simultaneously the muscular twitching disappeared and the skin eruption began to fade.

There was progressive clinical improvement and on the second hospital day the joints were no longer painful, though still slightly swollen. The temperature dropped to 100 F., as shown in the chart. Because evanescent urticarial lesions were still noted, a second procaine infusion was administered. The patient became completely symptom free on the third day and was discharged on the eighth hospital day in excellent condition.

COMMENT

The dramatic subsidence of symptoms in this case following the procaine infusions was very striking. The exact mode of action of this anesthetic in the treatment of serum sickness is at present unknown. State and Wangensteen[1] suggested several explanations for the procaine action, namely direct action on cells, antihistamine effect, antiacetylcholine action and epinephrine potentiation. These mechanisms are discussed in detail in their paper. It should also be mentioned that no untoward reactions were noted during the course of therapy. To our minds the procaine treatment merits further clinical trial in cases of serum sickness and other hypersensitive states.

LOCALIZATION BY FLUORESCEIN OF FIBERGLASS IN THROAT

COMMANDER MAX TRUMPER, H(S), U.S.N.R.
and
LIEUTENANT (jg) ALVIN HONIGSBERG (MC), U.S.N.R.

A sheetmetal worker was cutting a hatch overhead through 2 inches of fiberglass shortly before quitting time. In order to catch the bus for home he rushed from work and did not wash his face and hands, as all doing this type of work were instructed to do before leaving.

One and one-half hours later, when he started to eat supper, he noticed that something was sticking in his throat. Supper consisted of bread, beans, boiled cabbage, fried bacon and coffee. He could not continue with his supper because of gagging followed by vomiting. A few hours later he reported to the dispensary complaining of an irritation in his throat with pain on swallowing. The physician on duty at that time noticed that his throat was injected but did not find any causative agent. An anesthetic solution was sprayed in his throat and a careful search was made, with negative results. The patient returned home but was uncomfortable and unable to sleep during the night. The following morning he reported back to the dispensary with the same complaints. This time the patient came to our attention. The right anterior pillar was found to be injected and edematous and had also a granular appearance, but no foreign body could be observed. The patient still complained of pain by indicating an area on the right

Fiberglass and mucous membrane after removal, × 60.

side of the neck under the angle of the mandible. The pain was accentuated when gentle pressure was applied. In the throat there was a granular and edematous patch (1.5 by 0.5 cm.) which was moderately inflamed and highly sensitive

The photomicrograph was taken by W. S. Kerr, B.S.

This article has been released for publication by the Division of Publications of the Bureau of Medicine and Surgery of the U. S. Navy. The opinions and views set forth in this article are those of the writers and are not to be considered as reflecting the policies of the Navy Department.

to touch. The appearance of this area inside the throat resembled a patch of skin recently seen on the neck of another patient. On the latter, particles of fiberglass had become embedded in the neck as a result of rubbing to relieve itching. The area of the skin which contained the fiberglass was indurated and slightly raised, with pale yellow pinhead elevations. There was lacking the erythema usually associated with foreign body reactions.

This resemblance when supplemented by the localized symptoms led us to assume that there might be some fiberglass embedded in the throat. In an attempt to make visible the fine strands of fiberglass we painted the suspected area with fluorescein, ordinarily used for ophthalmologic purposes. This stained the mucous membrane and disclosed a longitudinal, elevated ridge approximately 1 mm. in diameter. This indicated the position of a foreign body. By drawing a bayonet forceps across this ridge, a sensation of resistance below the surface was obtained. On stripping back the mucous membrane overlying the upper pole of this ridge we felt a grating sensation. With one blade of the forceps the foreign body was exposed. Then the upper ends of the fiberglass were grasped with the forceps and gently withdrawn from the ridge and the lower ends which were embedded were lifted out intact. The illustration shows the fiberglass and mucous membrane after removal. There were no further complaints from the patient.

Council on Pharmacy and Chemistry

REPORT OF THE COUNCIL

The Council has authorized publication of the following statement.

AUSTIN SMITH, M.D., *Secretary.*

NEW NAMES "MERCUZANTHIN" AND "NOVATRINE"

Campbell Products, Inc., requested the Council to recognize the names "Mercuzanthin" and "Novatrine" for Mercupurin and Novatropine respectively. It is the intention of the firm to use the new names exclusively, and the Council has agreed to recognize these terms. The N. N. R. descriptions will be changed accordingly.

NEW AND NONOFFICIAL REMEDIES

The following additional articles have been accepted as conforming to the rules of the Council on Pharmacy and Chemistry of the American Medical Association for admission to New and Nonofficial Remedies. A copy of the rules on which the Council bases its action will be sent on application.

AUSTIN SMITH, M.D., *Secretary.*

PROCAINE HYDROCHLORIDE (See New and Nonofficial Remedies, 1945, p. 97).

The following additional dosage forms have been accepted:

ABBOTT LABORATORIES, NORTH CHICAGO, ILL.

Sterile Procaine Hydrochloride Crystals for Spinal Anesthesia: 500 mg. ampuls.

Procaine Hydrochloride Solution 5% W/V: 10 cc. ampuls. Each 10 cc. contains procaine hydrochloride 0.5 Gm. in water with 0.1 per cent sodium thiosulfate.

Procaine Hydrochloride Solution 20% W/V: 5 cc. ampuls. Each 5 cc. contains procaine hydrochloride 1 Gm. in water with 0.1 per cent sodium thiosulfate.

VITAMIN D (See New and Nonofficial Remedies, 1945, p. 626).

The following additional dosage form has been accepted:

WINTHROP CHEMICAL CO., INC., NEW YORK

Drisdol in Propylene Glycol: 10 cc. bottles. Each cubic centimeter contains 0.25 mg. of drisdol and has a potency of 10,000 units of vitamin D (U. S. P.) per gram. The propylene glycol used in the preparation of this product complies with the standards for propylene glycol-N. N. R.

METAPHEN (See New and Nonofficial Remedies, 1945, p. 150).

The following additional dosage form has been accepted:

ABBOTT LABORATORIES, NORTH CHICAGO, ILL.

Metaphen Disinfecting Solution for Dental and Surgical Instruments: 946 cc. and 3,785 cc. bottles. Contains Metaphen 1:2,500 W/V and benzyl alcohol 4.0 per cent in an aqueous solution containing ethylene glycol 20.0 per cent W/V and sufficient sodium hydroxide and sodium carbonate to neutralize the metaphen.

MANNITOL HEXANITRATE (See New and Nonofficial Remedies, 1945, p. 334).

The following dosage form has been accepted:

GEORGE A. BREON & CO., INC., KANSAS CITY, MO.

Tablets Mannitol Hexanitrate: 30 mg.

ANTHRALIN (See New and Nonofficial Remedies, 1945, p. 117).

The following dosage form has been accepted:

WINTHROP CHEMICAL CO., INC., NEW YORK

Cignolin: 10 Gm. bottles. Crystalline anthralin.

PERTUSSIS VACCINE, ALUM PRECIPITATED (See THE JOURNAL, Jan. 5, 1946, p. 31).

The following dosage form has been accepted:

SHARP & DOHME, INC., GLENOLDEN, PA.

Pertussis Bacterin, Alum Precipitated: 3 cc. vial (one immunization) and 10 cc. vial (three immunizations). 10,000 million H. pertussis per cubic centimeter. Preserved with phenylmercuric nitrate 1:50,000.

BACTERIAL VACCINE MADE FROM HEMOPHILUS PERTUSSIS (See THE JOURNAL, Jan. 5, 1946, p. 31).

The following dosage form has been accepted:

WYETH INCORPORATED, PHILADELPHIA

Pertussis Vaccine (Modified): 12 cc. and 20 cc. vials. 15,000 million H. pertussis per cubic centimeter. Preserved with phenol 0.5 per cent.

PENTOTHAL SODIUM (See New and Nonofficial Remedies, 1945, p. 517).

The following additional dosage form has been accepted:

ABBOTT LABORATORIES, NORTH CHICAGO, ILL.

Pentothal Sodium (Rectal): 3 Gm. vials with 0.18 Gm. anhydrous sodium carbonate as a buffer.

DIETHYLSTILBESTROL DIPROPIONATE (See THE JOURNAL, March 30, 1946, p. 857).

The following dosage forms have been accepted:

GEORGE A. BREON & CO., INC., KANSAS CITY, MO.

Caplets Diethylstilbestrol Dipropionate: 0.2 mg., 0.5 mg., 1.0 mg. and 5.0 mg.

Solution Diethylstilbestrol Dipropionate (In Sesame Oil): 1.0 mg. per cc. in 1 cc. ampuls.

ESTROGENIC SUBSTANCES (See New and Nonofficial Remedies, 1945, p. 436).

The following dosage form has been accepted:

BARRY BIOLOGICAL LABORATORY, DIVISION OF BARRY ALLERGY LABORATORIES, INC., DETROIT

Solution Estrogenic Hormones (Natural): 30 cc. and 100 cc. vials containing the equivalent of 10,000 international units per cubic centimeter of estrone in sesame oil with chlorobutanol 0.5 per cent as a preservative.

RIBOFLAVIN (See New and Nonofficial Remedies, 1945, p. 614).

The following dosage has been accepted:

PREMO PHARMACEUTICAL LABORATORIES, INC., NEW YORK

Tablets Riboflavin: 10 mg.

PENTOBARBITAL SODIUM (See New and Nonofficial Remedies, 1945, p. 516).

The following dosage form has been accepted:

PREMO PHARMACEUTICAL LABORATORIES, INC., NEW YORK

Solution Pentobarbital Sodium: 1 cc. and 2 cc. ampuls. Each cubic centimeter contains pentobarbital sodium 0.1625 Gm. and benzyl alcohol 2 per cent; in propylene glycol.

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MEDICAL EDUCATION IN THE UNITED STATES AND CANADA

FORTY-SIXTH ANNUAL REPORT ON MEDICAL EDUCATION IN THE UNITED STATES AND CANADA BY THE COUNCIL ON MEDICAL EDUCATION AND HOSPITALS OF THE AMERICAN MEDICAL ASSOCIATION

Victor Johnson, M.D., F. H. Arestad, M.D., and Anne Tipner

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In this forty-sixth annual compilation of information and statistics on medical education in the United States and Canada by the Council on Medical Education and Hospitals of the American Medical Association there occur discussions of such reconversion problems as the calendars of medical schools, accomplishments of the accelerated program, the restoration of students to the civilian status and the probable composition of the next freshman class. There are discussions of approved and proposed new medical schools as well as premedical, graduate and postgraduate education.

Statistics are given on student enrolments, graduates, geographic sources of freshmen, distribution of students by sex, fees and other data useful to many.

The Educational Number of THE JOURNAL is made possible because of the wholehearted cooperation of all concerned with supplying this information. Officers of medical schools, hospitals and other institutions as well as military and government officials have faithfully provided the Council not only with material specifically requested for this issue but with many records furnished throughout the year which are indispensable for this compilation. Throughout the months these individuals, institutions and organizations have also generously assisted the Council and its staff in their inspections and surveys.

This assembled material has proved to be of great value to medical schools, government and military agencies, physicians, medical educators, hospitals, students, interns, residents and the several groups concerned with specialty certification and graduate and postgraduate education. Besides this presentation in THE JOURNAL, reprints are made available and receive wide distribution. Separate reprints of the lists of approved internships, residencies and fellowships are also made. An index of the wide usefulness of these reprints is the fact that, in the past year, the Council has distributed thirteen thousand reprints of its residency and fellowship lists in response to requests for them.

MEDICAL SCHOOL CALENDARS

Medical schools commenced the accelerated program at somewhat different times, and, throughout the war, they departed from the peacetime uniformity of calendars. Medical school calendars have been exceedingly irregular, with new freshman classes admitted, or seniors graduating in one or another school in virtually every month of the year. Even within a given school the various classes (freshmen to seniors) may not have the same beginning date or the same date of conclusion of the academic year.

Therefore it is necessary to identify the session discussed in this Educational Number and relate it to the sessions described in preceding Educational Numbers.

In 1943 the Educational Number presented data primarily for the "session preceding the first class entering in 1943."

In 1944 most of the information applied to the succeeding session, "the first session commencing in 1943."

In 1945 the statistics covered mainly "the session which for most schools began in September or October of 1944 and terminated in June 1945," although some data were also given for the 1944 "second session."

The present 1946 Educational Number presents data for the 1945-1946 academic session identified for each

school in tables 1, 2 and 3. For freshmen this academic year began in September or October of 1945, except for fifteen four year schools in the United States, which admitted freshman classes earlier in the year. Data on graduates cover the period from July 1, 1945 to May 31, 1946. In most schools these graduations occurred in March 1946.

therefore have two graduating classes (June 1946 and June 1947) reported in next year's Educational Number. Two schools (Michigan and Woman's Medical) have admitted only one class per calendar year throughout the war, so that they will not have graduated an extra class when the reconversion process has been completed.

TABLE 1.—*Admission and Graduation Calendars of Medical Schools in the United States*

SCHOOL	Sessions for Which Data Are Given in This Educational Number: Freshman Session Began	Date of First Graduation	Date of Second Graduation	Dates of Next Two Entering Classes		Dates of Next Two Graduating Classes	
University of **Arkansas** School of Medicine	10- 1-45	9-24-45	.....	9-30-46	9-29-47	6-24-46	6-23-47
University of **California** Medical School	10-29-45	2-23-46	.....	9-19-46	9-47	10-46	6-21-47
College of Medical Evangelists	10- 5-45	9-25-45	.....	9-22-46	9-47	1- 2-47	*
University of Southern California School of Medicine	8- 6-45	1- 2-46	.....	9-16-46	9-47	7- 5-46	6-14-47
Stanford University School of Medicine	10- 8-45	.....	.....	9-23-46	*	6-16-46	6-15-47
University of **Colorado** School of Medicine	7- 2-45	3-19-46	.....	9-30-46	9-29-47	6- 9-47	6- 8-48
Yale University **(Connecticut)**	9-24-45	3-16-46	.....	9-16-46	*	6-18-47	*
Georgetown University **(District of Columbia)**	9-10-45	3-17-46	.....	9-16-46	9-15-47	6-15-47	5-29-48
George Washington University	9-17-45	3- 1-46	.....	9-30-46	9-47	5-28-47	6-48
Howard University College of Medicine	9-29-45	9- 7-45	.....	9-28-46	9-27-47	6- 7-46	6- 6-47
Emory University School of Medicine **(Georgia)**	9-24‡45	3-16-46	.....	9-24-46	9-47	3-15-47	3-48
University of Georgia School of Medicine	9-27-45	3-25-46	.....	9- 9-46	9-47	3-24-47	3-48
Loyola University **(Illinois)**	10- 1-45	4-19-46	.....	9-30-46	9-29-47	2- 7-47	3-25-48
Northwestern University Medical School	10- 1-45	3-17-46	.....	9-27-46	9-26-47	‡	‡
University of Chicago, The School of Medicine	6-19-45	3-29-46	.....	9-24-46	9-47	3-21-47	3-48
University of Illinois College of Medicine	10- 1-45	9-25-45	.....	9-30-46	9-29-47	6-21-46	6-20-47
Indiana University School of Medicine	9- 3-45	8-18-45	4-23-46	9-23-46	*	6-11-47	*
State University of **Iowa** College of Medicine	9-24-45	3-23-46	.....	9-23-46	9-22-47	3-15-47	3-20-48
University of **Kansas** School of Medicine	9-17-45	3-16-46	.....	9-20-46	*	3-18-47	*
University of Louisville **(Kentucky)**	7-11-45	3-23-46	.....	4- 1-46	1- 6-47	12-21-46	9-20-47
Louisiana State University School of Medicine	9-13-45	3-14-46	.....	9-10-46	9-47	3-12-47	*
Tulane University School of Medicine	9- 1-45	8-14-45	3-13-46	9- 3-46	9- 1-47	6-11-47	6-48
Johns Hopkins University **(Maryland)**	9-10-45	3-19-46	.....	9-30-46	9-29-47	6-10-47	6- 8-48
University of Maryland School of Medicine	9-19-45	3-22-46	.....	9- 3-46	9- 4-47	6- 7-47	6-48
Boston University **(Massachusetts)**	9-21-45	3-22-46	.....	9-19-46	9-47	5-26-47	5-48
Harvard Medical School	9-24-45	3-23-46	.....	9-23-46	9-22-47	6-47	6-48
Tufts College Medical School	9-17-45	3-27-46	.....	9-46	9-47	6-47	6-48
University of **Michigan** Medical School	10-29-45	9-15-45	.....	9-23-46	9-47	12-14-46	6-48
Wayne University College of Medicine	7- 2-45	3-25-46	.....	7- 8-46	9-47	6-12-47	6-48
University of **Minnesota** Medical School	7- 2-45	3-21-46	.....	4- 1-46	1- 6-47	12-19-46	9-12-47
St. Louis University **(Missouri)**	6-29-45	2-28-46	.....	9-17-46	9-16-47	6- 3-47	6- 1-48
Washington University School of Medicine	9-27-45	3-25-46	.....	9-16-46	9-15-47	6-22-47	6-16-48
Creighton University **(Nebraska)**	9-28-45	3-17-46	.....	9-27-46	9-47	6- 5-47	6-48
University of Nebraska College of Medicine	9-20-45	3-23-46	.....	9-13-46	9-19-47	3-22-47	3-22-48
Albany Medical College **(New York)**	7- 2-45	3-22-46	.....	9-30-46	9-29-47	6- 1-47	5-31-48
Long Island College of Medicine	9-24-45	3-28-46	.....	9-23-46	9-47	2-27-47	*
University of Buffalo School of Medicine	10- 1-45	.....	.....	9-30-46	9-29-47	6-22-46	6-21-47
Columbia University	10- 4-45	3-28-46	.....	9-12-46	9-47	6- 3-47	6-48
Cornell University Medical College	10- 1-45	3-29-46	.....	9-26-46	9-47	3-28-47	*
New York Medical College	9- 5-45	5-22-46	.....	9- 9-46	9- 8-47	6- 5-47	6- 4-48
New York University College of Medicine	10- 1-45	3-28-46	.....	9-23-46	9-47	6-11-47	6-48
University of Rochester School of Medicine	10- 1-45	3-23-46	.....	9-16-46	9-47	3-15-47	3-48
Syracuse University College of Medicine	10- 1-45	.....	.....	9- 2-46	*	6-21-46	6- 2-47
Duke University School of Medicine **(North Carolina)**	10- 1-45	3-23-46	.....	10- 7-46	10- 6-47	6-14-47	6-13-48
Bowman Gray School of Medicine	9-26-45	3-23-46	.....	9-25-46	9-29-47	12-20-46	12-20-47
University of Cincinnati **(Ohio)**	10- 8-45	3-22-46	.....	9-20-46	9-19-47	2-47	5-29-48
Western Reserve University School of Medicine	9-17-45	3-15-46	.....	9-18-46	9-47	6-11-47	6-48
Ohio State University College of Medicine	10- 2-45	3-15-46	.....	10- 1-46	10-47	3-15-47	3-48
University of **Oklahoma** School of Medicine	7- 2-45	3-22-46	.....	9-16-46	9-17-47	6- 2-47	6- 3-48
University of **Oregon** Medical School	7- 2-45	3-22-46	.....	10- 2-46	10- 1-47	6-20-47	6-48
Hahnemann Medical College **(Pennsylvania)**	10- 1-45	3-12-46	.....	9-30-46	9-47	6-27-47	3-48
Jefferson Medical College of Philadelphia	10- 1-45	3-27-46	.....	10- 1-46	9-15-47	6- 1-47	5-15-48
Temple University School of Medicine	7- 2-45	3-26-46	.....	9-16-46	9-47	6-47	6-48
University of Pennsylvania School of Medicine	9-24-45	3-16-46	.....	9-23-46	9-47	3-47	3-48
Woman's Medical College of Pennsylvania	9-10-45	1-10-46	.....	9-11-46	9-10-47	6-15-47	6-15-48
University of Pittsburgh School of Medicine	10- 1-45	2-28-46	.....	9-30-46	9-29-47	4-47	3-27-48
Medical College of the State of **South Carolina**	9-27-45	3- 8-46	.....	9-26-46	9-25-47	6- 5-47	6- 4-48
University of **Tennessee** College of Medicine	9-24-45	3-46†	.....	§	§	‡	‡
Meharry Medical College	9-27-45	9-17-45	.....	9-30-46	9-47	6-24-46	6- 2-47
Vanderbilt University School of Medicine	6-18-45	3-25-46	.....	9-46	9-47	6-47	6-48
Southwestern Medical College **(Texas)**	10- 1-45	9- 3-45	.....	9-30-46	9-47	6-10-46	6-47
Baylor University College of Medicine	9- 3-45	7-16-45	3-25-46	9- 9-46	9-22-47	6- 2-47	5-31-48
University of Texas School of Medicine	9-13-45	3- 2-46	.....	9-23-46	9-47	2-15-47	2-15-48
University of **Utah** School of Medicine	9-12-45	3- 2-46	.....	6-11-46	6-47	12-46	9-47
University of **Vermont** College of Medicine	7- 5-45	4- 2-46	.....	9-14-46	9-13-47	4-14-47	6-14-48
University of **Virginia** Department of Medicine	7- 6-45	3-23-46	.....	4- 5-46	9-47	6- 4-47	6-48
Medical College of Virginia	10- 1-45	3-22-46	.....	9-16-46	9- 2-47	6-17-47	6-10-48
University of **Wisconsin** Medical School	9-24-45	5-25-46	.....	9-23-46	9-22-47	5-24-47	5-23-48
Marquette University School of Medicine	5- 7-45	7- 5-45	3-4-46	3- 4-46	11-12-46	11- 2-47	7-31-48

* Date undetermined.
† Also September and December 1945.
§ 9-30-46, 12-46, 3-47 and 6-47.
‡ March, June, September and December 1947 and 1948.
‡ 3-27-47, June, September and December 1947.

By July 1, 1945 all but ten of the four year medical schools had completed the three year cycle of four graduating classes under the accelerated program. In the past year three of these (Tulane, Baylor and Marquette) graduated two classes. Of the remaining schools in this group there are five (Arkansas, Howard, Illinois, Meharry and Southwestern) which graduated a second class in June 1946, which was not covered in this Educational Number. These five schools will

Indiana reported two graduating classes in last year's Educational Number as well as another two in this report. This school has now graduated two extra classes, with six graduations in about four calendar years as compared with other schools which will have had but one extra graduating class during the period of acceleration.

Three schools (Stanford, Buffalo and Syracuse) report no graduating classes from July 1, 1945 to

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May 31, 1946. These schools also will have two graduating classes (June 1946 and June 1947) covered in next year's Educational Number.

RECONVERSION OF THE ACCELERATED PROGRAM

Tables 1, 2 and 3 also give the dates of the next two entering freshman classes as well as the next two graduation dates. The entrance dates given indicate that virtually every school is planning annual admissions in the fall of each year. Louisville, Minnesota and Marquette indicate a continuation of admissions of full freshman classes more frequently than once a year, at least for a time. Tennessee will admit students quarterly, as has been true for a number of years.

The annual admission of new classes does not preclude a continuation of acceleration. It is possible to admit students annually and to continue acceleration, in which case there would be one graduation per year, with no increase in numbers of graduates; although each student would complete his work in three years instead of four. However, almost all schools are decelerating, besides admitting classes annually.

It is regrettable that the educational experiment of acceleration could not be carried out under more favorable conditions. There is a tendency to ascribe all the deficiencies of wartime medical education to the accelerated program. Other important deleterious influences were operating entirely independently of acceleration in the medical schools. Among these were shortages of teaching staff, increased enrolments, inadequate premedical preparation and a state of uncertainty in the minds of students as to their future. Could the experiment have been conducted in the absence of these variables, perhaps the reaction against acceleration would now be less widespread.

A few schools will continue permanently to provide opportunities for acceleration on a voluntary basis. Others are temporarily continuing to accelerate for one or more of the upper classes, until reconversion to the prewar program can be completed.

The estimated number of graduates from June 1, 1946 to June 30, 1947 is given in table 4. Most of the schools will have graduations in June of 1947. However, there will be an appreciable number of students graduating in March 1947, and some students will graduate in every month of the thirteen shown except August 1946.

Table 5 recapitulates the admission dates and estimated numbers of graduates shown in the preceding tables. The predominance of admissions in September 1946 and graduations in June 1947 is clearly apparent.

ACCOMPLISHMENTS OF ACCELERATION

The net results in the production of additional physicians as a consequence of wartime acceleration and increased enrolments in medical schools will not be known until 1947, at which time all scheduled extra graduations will have been completed. From July 1, 1942 to June 30, 1945 there were 20,662 graduates. In the present Educational Number 5,826 graduates are reported. In table 4 it is estimated that an additional 6,544 will graduate by June 30, 1947. This will make a total of 33,032 graduates in the five year period commencing July 1, 1942. In the preceding five prewar years there were 25,818 graduates. Thus the wartime medical school program will have produced an estimated extra 7,214 physicians. The effect of this program on the outcome of the war cannot be stated in other than general terms. But it is clear that this effort was a major contribution by the medical schools and their depleted and overworked faculties.

MILITARY STATUS OF MEDICAL STUDENTS

At the beginning of the academic session under consideration, most of the students were still in the A. S. T. and Navy V-12 programs. The military and civilian status of students for the 1945-1946 session, before the military programs ceased, is shown by classes in table 6 and by schools in table 7. There were 8,374 in the Army (mainly the A. S. T. P.), 6,822 in the

TABLE 2.—*Admission and Graduation Calendars of Medical Schools in Canada*

SCHOOL	Sessions for Which Data Are Given in This Educational Number: Freshman Session Began	Date of First Graduation	Date of Second Graduation	Dates of Next Two Entering Classes		Dates of Next Two Graduating Classes	
University of Alberta	9-17-45	1- 5-46	.....	9-16-46	9-47	10- 1-46	5-10-47
University of Manitoba Faculty of Medicine	9-14-45	10-23-45	.....	9-13-46	9-47	7-46	5-47
Dalhousie University Faculty of Medicine	9-12-45	.....	.....	9-10-46	9- 9-47	5-11-47	5-48
Queen's University Faculty of Medicine	10- 1-45	2-15-46	.....	9-23-46	9-47	6-47	5-48
University of Western Ontario Medical School	9-10-45	2-27-46	.....	9- 9-46	9- 8-47	6-11-47	5- 2-48
University of Toronto Faculty of Medicine	9-25-45	2-22-46	.....	9-24-46	9-24-47	6-27-47	5-31-48
McGill University Faculty of Medicine	9- 5-45	10- 5-45	.....	9- 4-46	9- 3-47	5-29-47	5-15-48
University of Montreal Faculty of Medicine	9-17-45	9-12-45	.....	9-16-46	9-15-47	5- 1-47	5- 9-48
Laval University Faculty of Medicine	9-14-45	8-29-45	.....	9-12-46	9-13-47	6- 7-46	6-47
University of Saskatchewan School of Medical Sciences	10- 1-45	.....	.....	9-21-46	9-20-47	.....	.....

TABLE 3.—*Admission Calendars of Schools of the Basic Medical Sciences in the United States*

SCHOOL	Session for Which Data Are Given in This Educational Number; Freshman Session Began	Dates of Next Two Entering Classes for Freshmen	
*Medical College of **Alabama**	10- 8-45	10-46	10-47
University of **Mississippi** School of Medicine	9-25-45	9-24-46	1-31-47
University of **Missouri** School of Medicine	9-22-45	9-21-46	9-47
Dartmouth Medical School, **(New Hampshire)**	11- 5-45	9-30-46	9-47
University of **North Carolina** School of Medicine	9-17-45	9-16-46	9-15-47
University of **North Dakota** School of Medicine	9-24-45	9-23-46	9-22-47
University of **South Dakota** School of Medicine	9-17-45	9-16-46	9-17-47
West Virginia University School of Medicine	9-24-45	9-16-46	9-15-47

* Now operating clinical program, first class graduates in June 1947.

Navy (mainly the V-12 program), 1,208 veterans, 1,363 physically disqualified men, 2,388 occupationally deferred, 50 men under 18 years, 1,143 other men and 1,868 women. As compared with the statistics for the preceding academic session,[1] these figures represent a decrease in total enrolment of 812 and a decrease of students in these programs have been transferred into other categories. Of the 8,240 students formerly in the A. S. T. P. (see table 7) there were 3,257 discharged outright and 4,694 retained in the reserves, which accounts for 7,951, or 96 per cent, of the medical students formerly in army uniform. In the recon-

TABLE 4.—*Estimated Number of Graduates of Medical Schools, June 1, 1946 to June 30, 1947*

	1946							1947					
	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June
Medical College of **Alabama**	..	..	..	..	..	..	..	..	..	..	..	..	61 †
University of **Arkansas**	61	..	..	..	..	..	..	..	..	..	..	..	58
College of Medical Evangelists, **(California)**	..	..	..	..	..	..	..	87	..	..	..	..	..
Stanford University	61	..	..	..	..	..	..	..	..	..	..	..	60
University of California	..	..	..	..	69	..	..	..	..	..	..	..	71
University of Southern California	..	66	..	..	..	..	..	..	..	..	..	..	63
University of **Colorado**	..	..	..	..	..	..	..	..	..	..	..	..	56
Yale University, **(Connecticut)**	1	..	..	..	..	..	..	..	..	..	..	..	65
George Washington University, **(District of Columbia)**	..	..	..	..	..	..	..	..	..	..	..	79	..
Georgetown University	..	..	..	..	..	..	..	..	..	..	..	..	84
Howard University	64	..	..	..	..	..	..	..	..	..	..	..	68
Emory University, **(Georgia)**	..	..	..	..	..	..	..	..	..	55	..	..	..
University of Georgia	..	..	..	..	..	..	..	..	..	64	..	..	..
Loyola University, **(Illinois)**	..	..	..	..	..	..	..	..	80	..	..	..	..
Northwestern University	6	..	..	4	..	..	65	..	..	70	..	..	9
University of Chicago, The School of Medicine	3	..	..	..	..	..	..	..	..	61	..	..	..
University of Illinois	176	..	..	..	..	..	..	..	..	..	..	..	165
Indiana University	..	..	..	..	..	..	..	..	..	..	..	..	98
State University of **Iowa**	..	..	..	..	..	..	..	..	..	74	..	..	..
University of **Kansas**	..	..	..	..	..	..	..	..	..	71	..	..	..
University of Louisville, **(Kentucky)**	..	..	..	..	..	..	88	..	..	..	..	..	..
Louisiana State University	..	..	..	..	..	..	..	..	..	78	..	..	..
Tulane University	..	..	..	..	..	..	..	..	..	..	..	..	125
Johns Hopkins University, **(Maryland)**	1	..	..	..	..	..	..	..	..	..	..	..	81
University of Maryland	..	..	..	..	..	..	..	..	..	..	..	..	98
Boston University, **(Massachusetts)**	..	..	..	..	..	..	..	..	..	..	..	58	..
Harvard Medical School	..	..	..	..	..	..	..	..	..	..	..	..	133
Tufts College Medical School	..	..	..	..	..	..	..	..	..	..	..	..	103
University of **Michigan**	..	..	..	..	..	..	140	..	..	..	..	..	..
Wayne University	..	..	..	..	..	..	..	..	..	..	..	..	65
University of **Minnesota**	..	..	..	..	..	..	104	..	..	..	..	..	..
St. Louis University, **(Missouri)**	..	..	..	..	..	..	..	..	..	..	..	..	130
Washington University	..	..	..	..	..	..	..	..	..	..	..	..	100
Creighton University, **(Nebraska)**	..	..	..	..	..	..	..	..	..	..	..	..	57
University of Nebraska	..	..	..	..	..	..	..	..	..	77	..	..	..
Albany Medical College, **(New York)**	..	..	..	..	..	..	..	..	..	..	..	..	44
Columbia University	..	..	..	..	..	..	..	..	..	..	..	..	113
Cornell University	..	..	..	..	..	..	..	..	..	83	..	..	..
Long Island College of Medicine	..	..	..	..	..	..	..	..	98	..	..	..	..
New York Medical College	..	..	..	..	..	..	..	..	..	..	..	..	116
New York University	..	1	..	..	..	..	..	..	..	..	..	..	120
Syracuse University	47	..	..	..	..	..	..	..	..	..	..	..	38
University of **Buffalo**	78	..	..	..	..	..	..	..	..	..	..	..	78
University of Rochester	..	..	..	..	..	..	..	..	..	62	..	..	..
Duke University, **(North Carolina)**	..	..	..	..	..	..	..	..	..	..	..	..	67
Bowman Gray School of Medicine	2	..	..	..	..	..	38	..	..	1	..	..	..
Ohio State University	1	..	..	..	..	..	..	..	..	70	..	..	..
University of Cincinnati	..	..	..	..	..	..	..	..	82	..	..	..	..
Western Reserve University	..	..	..	..	..	..	..	..	..	..	..	..	79
University of **Oklahoma**	..	..	..	..	..	..	..	..	..	..	..	..	68
University of **Oregon**	..	..	..	..	..	..	..	..	..	..	..	..	71
Hahnemann Medical College, **(Pennsylvania)**	..	..	..	..	..	..	..	..	..	116	..	..	..
Jefferson Medical College	..	..	..	..	..	..	..	..	..	..	..	..	151
Temple University	..	..	..	..	..	..	..	..	..	..	..	..	130
University of Pennsylvania	..	..	..	..	..	..	..	..	..	135	..	..	..
University of Pittsburgh	..	..	..	..	..	..	..	..	..	..	83	..	..
Woman's Medical College	..	..	..	..	..	..	..	..	..	..	..	..	40
Medical College of **South Carolina**	..	..	..	..	..	..	..	..	..	..	..	..	51
Meharry Medical College, **(Tennessee)**	49	..	..	..	..	..	..	..	..	..	..	..	50
University of Tennessee	38	..	..	30	..	..	34	..	..	40	..	..	32
Vanderbilt University	..	..	..	..	..	..	..	..	..	..	..	..	45
Baylor University, **(Texas)**	..	..	..	..	..	..	..	..	..	..	..	..	76
Southwestern Medical College	34	..	..	..	..	..	..	..	..	..	..	..	56
University of Texas	..	..	..	..	..	..	31	..	87	..	..	..	..
University of **Utah**	..	..	..	..	..	..	..	..	..	..	..	..	7
University of **Vermont**	..	..	..	..	..	..	..	..	..	..	35	..	..
Medical College of **Virginia**	..	..	..	..	..	..	..	..	..	..	..	..	84
University of Virginia	..	..	..	..	..	..	..	..	..	..	..	..	69
Marquette University, **(Wisconsin)**	..	..	..	..	..	87	..	..	..	..	..	..	..
University of Wisconsin	..	..	..	..	..	..	..	..	..	..	..	62	..
Total	632	67	0	34	69	87	500	87	347	1,063	118	199	3,341

† Two graduating classes represented.

3,318 in Army students. In all other categories there were increases over the figures for the academic year 1944-1945. The major increases were the following groups: physically disqualified men, increased by 625; veterans, increased by 574; men in miscellaneous categories, increased by 512; and women increased by 516.

The end of the 1945-1946 session marked the end of the wartime A. S. T. and Navy V-12 programs, and version there were 289 A. S. T. P. students who left school. Of these 117 entered active duty not as medical officers and 172 left medical school for other reasons.

In the Navy there were 2,213 of the former 6,798 V-12 students who were discharged and 4,404 who became reserve officers. In these two categories are 97 per cent of those who were V-12 medical students. Only 181 navy students left school in the reconversion, 64 going into active navy service and 117 choosing to leave school.

1. J. A. M. A. **129:** 45 (Sept. 1) 1945.

Only 470 former military students left school when the military programs were discontinued. This is less than 3.5 per cent of the former A. S. T. and Navy V-12 students. This small percentage is somewhat surprising, since it includes men who were performing poorly academically. Apparently very few of those selected for admission to medical schools under the wartime programs lacked sufficient incentive or funds to continue when the financial support of the Army and Navy was withdrawn.

THE 1946 FRESHMAN CLASS

By June of this year the medical schools and schools of basic sciences in the United States had selected 4,666 students to enter school in 1946. The composition of these students is as follows: male veterans 2,816 (60 per cent), physically disqualified men 501 (11 per cent), occupationally deferred men 312 (7 per cent), men under 18 years 41 (1 per cent), other men 429 (9 per cent) and women 567 (12 per cent). The most striking figures are those for veterans, which will constitute about 60 per cent of the next freshman class. This large number must be attributed to the unexpectedly short time which elapsed between V-E day and V-J day and the consequently rapid demobilization of the Army and Navy, releasing men who apparently meet the medical school admission requirements. Pertinent questions regarding these many veterans are these: How many of them were rejected for admission to medical schools before entering military service? Do they possess sufficient motivation in medicine to meet the rigorous demands of the study of medicine? Only time will answer these questions. Every one would be pleased should the answers prove favorable to the veterans, not merely for the sake of the veterans themselves, but also in terms of the future medical care of the people. Admission of a student to medical school is the first step in that person's being given the serious responsibility of guarding the life and health of his patients. Such admission, therefore, is a serious responsibility of the medical schools.

The proportion of women admitted to 1946 freshman classes is less striking than might have been anticipated. Twelve per cent of those admitted are women, including 20 veterans. In the past forty years there never has been an enrolment of as many as 6 per cent women in all four classes of our medical schools.

The medical schools in this country, having selected 4,666 students for the 1946 entering class, state that 1,079 more are being selected from applications on file. This indicates that the freshman class will number about 5,745. If this number is not exceeded before classes open, this year's freshman enrolment will be the smallest in recent years.

Whether the 1946 class will be filled remains to be seen. Almost all schools expect to fill their 1946 freshman class and, in general, they judge the qualifications of those admitted to be about the same as those of freshman students before the war.

NEW MEDICAL SCHOOLS

Every school of the basic medical sciences except Dartmouth has expansion to the full four year status under consideration. Such expansion has already been authorized by law in Mississippi, North Carolina, North Dakota and South Dakota. A final decision has not yet been reached in Missouri and West Virginia.

Utah and Alabama are good examples of basic medical science schools whose responsibilities and resources seemed to indicate the advisability of expansion to the full four year status. Unfortunately, this cannot be said of certain other basic science schools.

It is necessary for these schools and for groups contemplating entirely new medical schools to realize certain basic axioms that are easily demonstrable: 1. The establishment and maintenance of an acceptable medical school is far more expensive than is any other form of higher education. 2. The cost is so great that a considerable number of states cannot and should not attempt to establish medical schools. 3. In general, qualified residents of states lacking a medical school have as much chance of entering a medical school as do residents in states in which there is a medical school. 4. The distribution of physicians in the various states is far more closely correlated with the per capita income of the state than with the existence of a medical school in the state.

TABLE 5.—*Distribution of Admission Dates by Schools and Estimated Number of Graduates for the Months June 1946 Through June 1947 in the United States; Schools of the Basic Medical Sciences Are Not Included*

	Number of New Freshman Classes Entering	Number of Graduates (Estimated)
1946		
June	1	632
July	1	67
August	..	..
September	59	34
October	4	69
November	1	87
December	1	500
1947		
January	2	87
February	..	347
March	1	1,063
April	..	118
May	..	199
June	2	3,341
Total		6,544

TABLE 6.—*Military Status of Medical Students in the United States by Classes at the Beginning of the 1945-1946 Academic Session*

	Army	Navy	Veterans	IV-F	Occup. Defer.	Men Under 18	Other Men	Women	Total
Freshmen	1,377	1,668	408	765	461	49	457	875	6,060
Sophomores	933	1,778	519	265	1,469	1	378	416	5,750
Juniors	2,497	2,102	157	182	344	0	151	318	5,751
Seniors	3,567	1,274	124	151	123	0	157	259	5,655
Total	8,374	6,822	1,208	1,363	2,388	50	1,143	1,868	23,216

Lack of understanding of these principles may well lead to failure by states seeking to establish complete medical schools, despite the good intentions of the promoters of such enterprises. Unless the necessary resources, including plenty of money, are available, only harm results from misguided efforts to embark on adventures in medical education.

There are two institutions which are well on the way toward establishment of entirely new medical schools. These are the University of Washington, which is organizing a medical school in Seattle, and the University of California, which will establish a school in the Los Angeles area as part of the Los Angeles branch of the university. In Canada, a new medical school has been established by the University of Ottawa.

THE LOCATION OF A MEDICAL SCHOOL

In recent years, with proposals for new medical schools or expansion of basic science schools to the four year status, the question of location of the pro-

posed school has been debated at length. In its simplest form, the question may be formulated thus: When a university wishes to establish a medical school, should that school be located on the university campus or should it be located where clinical facilities are already tionably be located on a university campus IF sufficient funds are provided. This is a very large "if." The funds must be adequate to construct a hospital if a satisfactory hospital is lacking on the campus. This means the expenditure of at least $10,000 per bed to

TABLE 7.—*Military Status of Medical Students in the United States by Schools at the Beginning of the 1945-1946 Academic Session*

	A.S.T.P.	V-12	Army Reserves (Inactive)	Navy Reserves (Inactive)	Veterans	IV-F	Occupationally Deferred	Men Under 18	Other Men	Women	Total
Medical College of **Alabama**	39	39	5	0	3	12	0	0	19	16	124
University of **Arkansas**	70	84	0	0	12	21	29	3	8	21	248
University of **California**	63	77	0	0	28	11	36	0	23	38	276
College of Medical Evangelists	104	13	0	1	11	22	103	2	55	28	339
University of Southern California	90	81	0	1	12	9	47	0	1	12	253
Stanford University	51	89	2	2	2	2	26	0	34	28	236
University of **Colorado**	89	69	1	0	12	25	22	0	8	18	244
Yale University, **(Connecticut)**	89	82	2	0	18	6	21	0	3	23	244
Georgetown University, **(Dist. of Columbia)**	168	126	0	0	20	11	64	0	25	0	354
George Washington University	115	99	3	1	19	8	46	1	8	25	325
Howard University	104	0	2	0	15	15	94	0	15	31	274
Emory University, **(Georgia)**	48	94	13	0	0	7	30	1	1	13	237
University of Georgia	116	67	0	0	8	17	62	1	2	13	286
Loyola University, **(Illinois)**	102	89	5	0	18	15	46	0	14	20	309
Northwestern University	189	172	6	2	20	18	19	3	111	25	565
University of Chicago, The School of Medicine	91	89	0	2	13	11	33	1	0	16	247
University of Illinois	210	181	0	0	35	90	44	7	0	71	647
Indiana University	117	112	0	0	25	29	24	0	13	30	350
State University of **Iowa**	139	98	0	0	9	20	14	0	1	21	293
University of **Kansas**	92	95	0	0	14	30	34	0	0	26	291
University of Louisville, **(Kentucky)**	157	95	3	0	17	19	45	1	0	16	351
Louisiana State University	90	93	4	3	32	2	48	1	1	35	310
Tulane University of Louisiana	133	185	0	0	21	32	92	0	14	27	474
Johns Hopkins University, **(Maryland)**	93	109	3	0	14	17	33	2	4	23	298
University of **Maryland**	146	120	2	1	44	8	40	1	5	22	350
Boston University, **(Massachusetts)**	112	67	0	0	21	9	19	0	1	18	247
Harvard Medical School	178	182	5	1	28	20	54	2	10	12	492
Tufts College	153	151	0	0	3	22	18	0	23	40	410
University of **Michigan**	185	178	0	0	13	28	24	0	57	58	543
Wayne University	96	77	2	0	25	9	0	0	29	14	252
University of **Minnesota**	156	143	3	0	5	34	50	0	0	35	426
University of **Mississippi**	12	16	0	0	10	3	4	1	5	6	57
University of **Missouri**	16	23	0	0	5	8	1	0	4	6	63
St. Louis University	190	163	8	0	20	25	69	3	2	0	480
Washington University	129	104	6	1	25	18	43	0	2	33	361
Creighton University, **(Nebraska)**	97	66	0	0	0	16	19	0	30	14	242
University of Nebraska	133	96	1	1	19	23	32	0	0	13	318
Dartmouth Medical School, **(New Hampshire)**	6	20	0	0	0	1	3	0	0	0	30
Albany Medical College, **(New York)**	60	53	0	0	11	5	0	0	31	20	180
Long Island College of Medicine	171	113	3	0	29	17	44	0	4	30	411
University of Buffalo	120	74	0	0	18	45	14	0	16	19	306
Columbia University	166	143	2	0	26	18	48	0	8	47	458
Cornell University	123	100	0	0	17	7	24	0	16	28	315
New York Medical College	149	129	5	2	13	13	57	0	39	51	458
New York University	205	134	4	2	39	8	53	3	17	52	517
University of Rochester	100	85	4	0	15	2	5	0	23	24	258
Syracuse University	70	55	1	0	10	15	14	0	1	26	192
University of **North Carolina**	15	24	0	0	1	5	36	0	0	11	92
Duke University	87	116	1	0	10	18	31	0	1	18	282
Bowman Gray School of Medicine	69	62	1	0	6	1	42	0	0	9	190
University of **North Dakota**	12	17	0	0	0	7	11	0	5	2	54
University of Cincinnati, **(Ohio)**	135	76	4	0	19	37	29	0	0	21	322
Western Reserve University	145	84	0	0	21	25	26	0	10	17	328
Ohio State University	127	72	0	0	26	18	17	0	19	22	311
University of **Oklahoma**	129	81	0	0	13	6	19	0	9	24	281
University of **Oregon**	106	73	3	0	7	22	17	0	33	21	282
Hahnemann Medical College, **(Pennsylvania)**	159	98	5	0	62	48	87	6	1	43	509
Jefferson Medical College	233	178	6	2	5	108	73	0	0	0	605
Temple University	185	136	4	0	20	34	56	0	1	38	474
University of Pennsylvania	179	161	6	0	36	34	72	1	1	26	516
Woman's Medical College	0	0	0	0	0	0	0	0	0	162	162
University of Pittsburgh	118	78	0	0	47	25	0	0	23	28	319
Medical College of **South Carolina**	82	59	2	1	7	7	30	1	7	9	205
University of **South Dakota**	18	19	0	0	2	4	5	0	0	1	49
University of **Tennessee**	174	109	0	0	23	3	0	0	112	23	444
Meharry Medical College	116	0	1	0	14	19	36	2	21	23	232
Vanderbilt University	70	59	0	0	5	14	33	0	0	9	190
Southwestern Medical College, **(Texas)**	45	61	0	1	13	11	21	7	23	21	203
Baylor University	76	97	0	0	18	21	23	0	24	16	275
University of Texas	117	128	0	0	15	20	0	0	44	34	358
University of **Utah**	73	36	0	0	5	12	26	0	6	8	166
University of **Vermont**	75	34	0	0	8	1	19	0	0	14	151
University of **Virginia**	86	92	0	0	21	12	0	0	36	10	257
Medical College of Virginia	103	113	2	0	12	15	29	0	7	32	325
West Virginia University	8	15	0	0	1	5	17	0	1	9	56
University of **Wisconsin**	66	98	1	0	18	18	27	0	1	37	266
Marquette University	143	111	3	0	9	0	0	0	77	23	366
	8,240	6,798	134	24	1,208	1,363	2,388	59	1,143	1,868	23,216

available? This question has been and is being debated in Alabama, North Carolina, Missouri, California and (in Canada) British Columbia. The question arises because often universities are not located in large population centers or adjacent to established clinical facilities. The answer to the question is simple, provided an "if" is permitted. A medical school should unquescover construction and equipment. At least a 400 bed hospital is required. The cost of operating such a hospital on a charity basis, including transportation of patients and the employment of full time clinical faculty members in a relatively small community, is staggering and dwarfs other university expenditures into insignificance. No proposal made recently to establish a

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medical school and teaching hospital on a university campus at a distance from population centers or established clinical facilities has included adequate financing for construction and equipment and for maintenance throughout the years. The well known and entirely valid arguments for a university location of a medical school and its hospital are sheer rhetoric and wishful thinking unless there is also a realistic appreciation of the costs involved and a willingness and ability to assume the financial responsibility entailed.

PREMEDICAL EDUCATION

The premedical requirements for admission to the various medical and basic science schools in the United States and Canada are set forth in tables 8, 9 and 10. There is a distinct trend toward the reestablishment of the prewar requirements. There are now sixty-seven of the eighty-seven schools requiring three or more years of premedical work.

An important problem regarding premedical requirements is posed by the many excellent educational opportunities at the high school and college level afforded men in the armed forces. The American Council on Education recommends the awarding of certain high school and college credits for courses taken by members of the armed forces (*a*) by correspondence through the "Armed Forces Institute," which operates in collaboration with colleges and universities, and (*b*) in classroom work in various schools operated for men and women in the armed services.

The American Council on Education, representing higher education in this country, has carefully evaluated the content and quality of the many courses given in both these categories. It has issued the "Guide to the Evaluation of Educational Experiences in the Armed Forces" to assist colleges desiring to do so to award proper high school and college credit for specific courses taken in this program.

In addition to awarding credit for courses actually taken, as already described, there is a program for evaluating a veteran's learning experiences while in the armed forces by administering "general educational development tests" and awarding appropriate credit at the high school and college levels on the basis of the examination results, even though formal course work in the subject matter of the examination was not taken by the candidate. These are comprehensive examinations developed by the Armed Forces Institute and sponsored by the American Council on Education.

The Council on Medical Education and Hospitals of the American Medical Association has already agreed to these recommendations in principle and will shortly issue a detailed statement of its policies regarding the awarding of premedical credits under this plan.

There should be an agreement by all concerned, that men and women—particularly veterans—will not be compelled to study again in formal courses what they have already mastered in high school or premedical subjects not involving laboratory work. This can be done while still recognizing that unwarranted leniency in evaluating the qualifications of an applicant for medical school admission would constitute a disservice to the applicant, the medical school and the public.

APPROVED MEDICAL SCHOOLS

Medical schools approved by the Council on Medical Education and Hospitals of the American Medical Association in the United States are shown in table 8 (pages 1284 and 1285); those in Canada are listed in table 9 (page 1286). Approved schools of the basic medical sciences in the United States and Canada are given in table 10 (page 1286). The tables give the quantitative premedical requirements effective next year, the enrolment by classes for the academic year 1945-1946, including students in a required year of internship or research, and the total attendance, which does not include students in the intern year. The session (1945-1946) commenced in September or October in most schools. The number of graduates from July 1, 1945 to May 31, 1946 is also given for each school. Four schools in the United States (Indiana, Tulane, Baylor and Marquette) graduated two classes in this period. Figures for the two graduating classes are combined. In the case of the Canadian schools (table 9, page 1286) enrolments are also given for premedical students in the medical school, as well as for a fifth medical year and the required intern year.

For each school the name of the dean or executive officer is also given. Since the publication of last year's Educational Number there have been twenty-three changes in the executive officers of the eighty-seven medical and basic science schools in the United States and Canada. These have occurred at the College of Medical Evangelists, Howard, Loyola, Illinois, Indiana, Louisiana, Tulane, Maryland, Boston, Washington, Nebraska, Buffalo, New York University, Oklahoma, Hahnemann, Pennsylvania, Southwestern, Utah, Wisconsin, Alabama, Mississippi, South Dakota and Alberta. Significant numbers of new deans are appointed each year. In the past year there has been an unusually large turnover.

The Medical College of Alabama is listed with the basic science schools, since the full four year program has only recently been in operation.

The Hahnemann Medical College in Philadelphia is on probation, as are also the basic science schools of North Dakota and South Dakota.

ENROLMENTS

Enrolments for the 1945-1946 session are given in tables 8 (pages 1284 and 1285), 9 (page 1286) and 10 (page 1286) and are recapitulated in table 11 (page 1287). In the sixty-nine medical and eight basic science schools in the United States there were 23,216 students enrolled, excluding students in the intern year. This number is only 812, or about 3 per cent less than the enrolment of 24,028 in the preceding 1944-1945 session. Total enrolments have not changed appreciably in the past three academic sessions.

In the Canadian schools, including one basic science school, 2,570 students enrolled, which is 407 more than in the preceding session. Table 9 shows that in certain schools there were no students enrolled in one or another of the four classes. This result is a consequence of the deceleration process, which is nearer completion in Canada than in the United States.

There were 363 premedical and 40 fifth (not intern) year students in the Canadian schools. This figure is included in the "total" column of table 9 but not in the "total" column of table 11. Students in a required intern year numbered 644, in the United States (488) and Canada (156).

In the United States enrolments of over 500 students occurred at seven medical schools: Illinois (647), Jefferson (605), Northwestern (565), Michigan (543), New York University (517), Pennsylvania (516) and Hahnemann (509). The latter school, with one of the highest enrolments in the country, is on probation.

TABLE 8.—*Approved Medical Schools in the United States*

	Name and Location of School	1947 Premedical Requirement by Years	Students by Classes, 1945-1946						Graduates July 1, 1945 to May 31, 1946 #	Executive Officer	
			1st Year	2d Year	3d Year	4th Year	Required Intern Year †	Totals			
	ARKANSAS										
1	University of Arkansas School of Medicine, Little Rock	2	73	56	58	61	..	248	67	Byron L. Robinson, M.D., Dean	1
	CALIFORNIA										
2	University of California Medical School, Berkeley-San Francisco	3	68	68	71	69	..	276	73	Francis Scott Smyth, M.D., Dean	2
3	College of Medical Evangelists, Loma Linda-Los Angeles	3	69	93	87	90	93	339	93	Harold Shryock, M.D., Dean, Loma Linda; W. F. Norwood, Ph.D., Dean, Los Angeles	3
4	University of Southern California School of Medicine, Los Angeles	3	63	61	63	66	63	253	63	Burrell O. Raulston, M.D., Dean	4
5	Stanford University School of Medicine, Stanford University-San Francisco	3	62	57	57	60	61	236	..	Loren Roscoe Chandler, M.D., Dean	5
	COLORADO										
6	University of Colorado School of Medicine, Denver	3	65	56	56	55	..	232	54	Ward Darley, M.D., Dean	6
	CONNECTICUT										
7	Yale University School of Medicine, New Haven	3	56	64	64	60	..	244	59	Francis G. Blake, M.D., Dean	7
	DISTRICT OF COLUMBIA										
8	Georgetown University School of Medicine, Washington	3	99	84	90	81	..	354	81	David V. McCauley, S.J., Ph.D., Dean	8
9	George Washington University School of Medicine, Washington	3	84	78	79	84	..	325	83	Walter A. Bloedorn, M.D., Dean	9
10	Howard University College of Medicine, Washington	2	75	64	69	66	..	274	58	Joseph L. Johnson, M.D., Dean	10
	GEORGIA										
11	Emory University School of Medicine, Atlanta	3	60	57	56	64	..	237	64	Eugene A. Stead, Jr., M.D., Dean	11
12	University of Georgia School of Medicine, Augusta	3	76	74	68	68	..	286	68	G. Lombard Kelly, M.D., Dean	12
	ILLINOIS										
13	Loyola University School of Medicine, Chicago	3	88	75	78	68	..	309	68	James J. Smith, M.D., Dean	13
14	Northwestern University Medical School, Chicago	3	134	129	145	157	145	565	155	J. Roscoe Miller, M.D., Dean	14
15	University of Chicago, The School of Medicine	3	65	62	64	56	..	247	58	A. C. Bachmeyer, M.D., Asso. Dean, Biology Div.; F. J. Mullin, Ph.D., Dean of Students	15
16	University of Illinois College of Medicine, Chicago	3	164	134	167	182	..	647	185	Andrew C. Ivy, M.D., Vice President	16
	INDIANA										
17	Indiana University School of Medicine, Bloomington-Indianapolis	3	81	86	99	84	..	350	183‡	John D. Van Nuys, M.D., Ex. Sec., Admin. Com.	17
	IOWA										
18	State University of Iowa College of Medicine, Iowa City	3	82	66	78	67	..	293	67	Ewen Murchison MacEwen, M.D., Dean	18
	KANSAS										
19	University of Kansas School of Medicine, Lawrence-Kansas City	90 sem. hrs.	74	70	72	75	..	291	75	Harry R. Wahl, M.D., Dean	19
	KENTUCKY										
20	University of Louisville School of Medicine, Louisville	2	86	86	88	91	..	351	91	John Walker Moore, M.D., Dean	20
	LOUISIANA										
21	Louisiana State University School of Medicine, New Orleans	3	82	85	74	69	..	310	67	Vernon W. Lippard, M.D., Dean	21
22	Tulane University of Louisiana School of Medicine, New Orleans	3	125	97	126	126	..	474	266‡	Maxwell E. Lapham, M.D., Dean	22
	MARYLAND										
23	Johns Hopkins University School of Medicine, Baltimore	Degree	70	70	80	78	..	298	76	Alan M. Chesney, M.D., Dean	23
24	University of Maryland School of Medicine and College of Phys. and Surgs., Baltimore	3	82	83	96	98	..	359	97	H. Boyd Wylie, M.D., Acting Dean	24
	MASSACHUSETTS										
25	Boston University School of Medicine, Boston	3	69	59	58	61	..	247	60	Donald G. Anderson, M.D., Dean	25
26	Harvard Medical School, Boston	2	112	107	132	141	..	492	141	C. Sidney Burwell, M.D., Dean	26
27	Tufts College Medical School, Boston	4	104	100	103	103	..	410	103	Dwight O'Hara, M.D., Dean	27
	MICHIGAN										
28	University of Michigan Medical School, Ann Arbor	90 sem. hrs.	124	133	146	140	..	543	136	Albert C. Furstenberg, M.D., Dean	28
29	Wayne University College of Medicine, Detroit	2	67	67	65	53	..	252	53	Hardy A. Kemp, M.D., Dean	29
	MINNESOTA										
30	University of Minnesota Medical School, Minneapolis	3	99	96	115	116	126	426	126	Harold S. Diehl, M.D., Dean	30
	MISSOURI										
31	St. Louis University School of Medicine, St. Louis	3	104	128	132	125	..	489	124	Alphonse M. Schwitalla, S.J., Ph.D., Dean	31
32	Washington University School of Medicine, St. Louis	3	87	79	101	94	..	361	93	Robert A. Moore, M.D., Acting Dean	32

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TABLE 8.—*Approved Medical Schools in the United States—Continued*

	NEBRASKA									
33	Creighton University School of Medicine, Omaha	60 sem. hrs.	61	65	57	59	..	242	59	Charles M. Wilhelmj, M.D., Dean	33
34	University of Nebraska College of Medicine, Omaha	3	85	82	76	75	..	318	75†	Harold C. Lueth, M.D., Dean	34
	NEW YORK									
35	Albany Medical College, Albany	3	46	44	46	44	..	180	44	R. S. Cunningham, M.D., Dean	35
36	Long Island College of Medicine, Brooklyn	3	112	95	102	102	..	411	101	Jean A. Curran, M.D., President and Dean	36
37	University of Buffalo School of Medicine, Buffalo	3	73	75	80	78	..	306	...	Stockton Kimball, M.D., Dean	37
38	Columbia University College of Physicians and Surgeons, New York	3	114	113	115	116	..	458	113	Willard C. Rappleye, M.D., Dean	38
39	Cornell University Medical College, New York	3	80	72	82	81	..	315	80	Joseph C. Hinsey, Ph.D., Dean	39
40	New York Medical College, Flower and Fifth Avenue Hospitals, New York	3	128	118	116	96	..	458	96	J. A. W. Hetrick, M.D., President and Dean	40
41	New York University College of Medicine, New York	2	121	142	122	131	..	517	132	Currier McEwen, M.D., Dean	41
42	University of Rochester School of Medicine and Dentistry, Rochester	2	65	67	62	64	..	258	65	George H. Whipple, M.D., Dean	42
43	Syracuse University College of Medicine, Syracuse	3	58	49	38	47	..	192	...	H. G. Weiskotten, M.D., Dean	43
	NORTH CAROLINA									
44	Duke University School of Medicine, Durham	3	72	72	67	71	..	282	71	Wilburt C. Davison, M.D., Dean	44
45	Bowman Gray School of Medicine of Wake Forest College, Winston-Salem	3	51	50	41	48	..	190	47	C. C. Carpenter, M.D., Dean	45
	OHIO									
46	University of Cincinnati College of Medicine, Cincinnati	3	88	77	79	78	..	322	76	Stanley Dorst, M.D., Dean	46
47	Western Reserve University School of Medicine, Cleveland	3	84	79	83	82	..	328	82	Joseph T. Wearn, M.D., Dean	47
48	Ohio State University College of Medicine, Columbus	3	83	77	77	74	..	311	72	Charles A. Doan, M.D., Dean	48
	OKLAHOMA									
49	University of Oklahoma School of Medicine, Oklahoma City	3	72	71	68	70	..	281	69	Wann Langston, M.D., Dean	49
	OREGON									
50	University of Oregon Medical School, Portland	3	73	69	72	68	..	282	68	D. W. E. Baird, M.D., Dean	50
	PENNSYLVANIA									
51	*Hahnemann Medical College and Hospital of Philadelphia	3	105	144	135	125	..	509	125	Charles L. Brown, M.D., Dean	51
52	Jefferson Medical College of Philadelphia	2	154	144	152	155	..	605	155	William H. Perkins, M.D., Dean	52
53	Temple University School of Medicine, Philadelphia	3	117	115	117	125	..	474	125	William N. Parkinson, M.D., Dean	53
54	University of Pennsylvania School of Medicine, Philadelphia	3	131	113	138	134	..	516	133	Isaac Starr, M.D., Dean	54
55	Woman's Medical College of Pennsylvania, Philadelphia	3	47	39	39	37	..	162	36	Marion Fay, Ph.D., Dean	55
56	University of Pittsburgh School of Medicine, Pittsburgh	2	86	73	82	78	..	319	78	William S. McElroy, M.D., Dean	56
	SOUTH CAROLINA									
57	Medical College of the State of South Carolina, Charleston	3	59	55	49	42	..	205	42	Kenneth M. Lynch, M.D., Dean	57
	TENNESSEE									
58	University of Tennessee College of Medicine, Memphis	2	139	103	104	97	..	443	99	O. W. Hyman, Ph.D., Dean	58
59	Meharry Medical College, Nashville	2	51	62	59	60	..	232	64	Murray C. Brown, M.D., Director of Medical Education; Michael J. Bent, M.D., Dean	59
60	Vanderbilt University School of Medicine, Nashville	3 and Degree	51	45	46	48	..	190	47	Ernest W. Goodpasture, M.D., Dean	60
	TEXAS									
61	Southwestern Medical College of the Southwestern Medical Foundation, Dallas	3	66	48	55	34	..	203	48	William L. Hart, M.D., Dean	61
62	Baylor University College of Medicine, Houston	90 sem. hrs.	82	71	73	49	..	275	88‡	W. H. Moursund, M.D., Dean	62
63	University of Texas School of Medicine, Galveston	3	98	88	87	90	..	358	88	Chauncey D. Leake, Ph.D., Vice President; D. Bailey Calvin, Ph.D., Dean of Students	63
	UTAH									
64	University of Utah School of Medicine, Salt Lake City	3	48	43	38	37	..	166	38	Richard H. Young, M.D., Dean	64
	VERMONT									
65	University of Vermont College of Medicine, Burlington	3	40	40	34	37	..	151	37	William Eustis Brown, M.D., Dean	65
	VIRGINIA									
66	University of Virginia Department of Medicine, Charlottesville	3	66	57	69	65	..	257	65	Harvey E. Jordan, Ph.D., Dean	66
67	Medical College of Virginia, Richmond	3	80	70	85	90	..	325	89	J. P. Gray, M.D., Dean	67
	WISCONSIN									
68	University of Wisconsin Medical School, Madison	2	65	65	62	74	..	266	74	William S. Middleton, M.D., Dean	68
69	Marquette University School of Medicine, Milwaukee	3	96	99	85	86	..	366	164‡	Eben J. Carey, M.D., Dean	69
	Totals		5,796	5,511	5,729	5,655	488	22,691	5,826		

See table 1 for individual school graduation dates. * On probation. † Intern enrolment not included in total column. ‡ Figures are for two graduating classes.

There were seven schools in this country with enrolments under 200; these were Vermont (151), Woman's Medical (162), Utah (166), Albany (180), Bowman Gray (190), Vanderbilt (190) and Syracuse (192).

In Canada the highest enrolment occurred at Toronto, with 860 students. However, this number includes 302 students in premedical work. About one half of these premedical students will complete that work in 1946 and about one half in 1947. The lowest medical school enrolment in Canada was at Alberta, with 111 students, where there were no seniors in attendance.

In the schools of basic medical sciences in this country the total enrolment was 525. Alabama and North Carolina had most students, with 102 and 92 respectively. Alabama also had an additional 22 third year students in its four year program. The lowest basic science school enrolment was at Dartmouth, where there were 30 students.

In table 12 enrolments in the various classes and the intern year in the United States are given for each academic session since 1930-1931. The total enrolment in the past year was 23,704, including interns from those schools requiring this work for the M.D. degree. This total enrolment is the lowest since the 1942-1943 academic year. Since the preceding 1944-1945 session there have been reductions in numbers of freshmen (463 less), sophomores (229 less) and seniors (171 less). An increase occurred in the junior class (51 more) and in interns (36 more).

TABLE 9.—*Approved Medical Schools in Canada*

Name and Location of School	1947 Premedical Requirement by Years	Students by Classes, 1945-1946: First Premedical Year	Second Premedical Year	Freshmen	Sophomore	Junior	Senior	Additional Year	Required Intern Year †	Totals	Graduates July 1, 1945 to May 31, 1946 #	Executive Officer
ALBERTA												
1 University of Alberta Faculty of Medicine, Edmonton	3	..	..	37	41	33	0	..	21	111	20	John J. Ower, M.D., Dean
MANITOBA												
2 University of Manitoba Faculty of Medicine, Winnipeg	2	..	..	61	60	64	62	..	55	247	56	A. T. Mathers, M.D., Dean
NOVA SCOTIA												
3 Dalhousie University Faculty of Medicine, Halifax	2	..	..	52	50	36	29	..	0	167	0	H. G. Grant, M.D., Dean
ONTARIO												
4 Queen's University Faculty of Medicine, Kingston	1	..	61	50	48	0	50	40	..	249	41	G. Spencer Melvin, M.D., Dean
5 University of Western Ontario Medical School, London	2	..	..	63	41	34	38	..	..	176	38	G. E. Hall, M.D., Dean
6 University of Toronto Faculty of Medicine, Toronto	1	302*	..	170	123	129	156	..	..	860	131	W. E. Gallie, M.D., Dean
QUEBEC												
7 McGill University Faculty of Medicine, Montreal	3	..	..	144	103	103	0	..	..	350	101	J. C. Meakins, M.D., Dean
8 University of Montreal Faculty of Medicine, Montreal	Degree	..	..	104	91	102	0	..	80	297	56	Edmond Dubé, M.D., Dean
9 Laval University Faculty of Medicine, Quebec	Degree	..	..	157	108	98	106	..	..	469	70	Charles Vézina, M.D., Dean
Totals		302	61	868	665	599	421	40	156	2,926	513	

† Intern enrolment not included in total column. # See table 2 for individual school graduation dates.
* Includes 149 students in "first ex-service year."

TABLE 10.—*Approved Schools of the Basic Medical Sciences in the United States and Canada*

Name and Location of School	1947 Premedical Requirement by Years	Students by Classes, 1945-1946: 1st Year	2d Year	Total	Executive Officer	
ALABAMA						
1 Medical College of Alabama, Birmingham #	3	53	49	124†	Roy R. Kracke, M.D., Dean	1
MISSISSIPPI						
2 University of Mississippi School of Medicine, University	3	29	28	67	D. S. Pankratz, M.D., Acting Dean	2
MISSOURI						
3 University of Missouri School of Medicine, Columbia	3	40	23	63	Dudley S. Conley, M.D., Dean	3
NEW HAMPSHIRE						
4 Dartmouth Medical School, Hanover	3	12	18	30	Rolf C. Syvertsen, M.D., Dean	4
NORTH CAROLINA						
5 University of North Carolina School of Medicine, Chapel Hill	3	47	45	92	W. Reece Berryhill, M.D., Dean	5
NORTH DAKOTA						
6 *University of North Dakota School of Medicine, Grand Forks	3	29	25	54	H. E. French, M.D., Dean	6
SOUTH DAKOTA						
7 *University of South Dakota School of Medical Sciences, Vermillion	2	24	25	49	Donald Slaughter, M.D., Dean	7
WEST VIRGINIA						
8 West Virginia University School of Medicine, Morgantown	3	30	26	56	Edward J. Van Liere, M.D., Dean	8
CANADA						
9 University of Saskatchewan School of Medical Sciences, Saskatoon, Sask.	2	24	23	47	W. S. Lindsay, M.B., Dean	9
Totals		288	262	572†		

Four year program started in 1945. † Includes 22 third year students. * On probation.

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Apparently the peak in wartime medical school enrolments has just been passed. The largest enrolments since 1930-1931 occurred in the 1944 "second session" in the freshmen, sophomore and junior classes and in total enrolments. The peak in the senior class occurred a year later, in the 1944-1945 academic year. The large enrolments during wartime were justified because of the acute need for military and civilian physicians. With the return to a normal program of medical education, appreciable reductions in enrolments should occur, particularly in schools with limited resources and facilities.

TABLE 11.—*Total Enrolments by Classes in Medical Schools of the United States and Canada for the 1945-1946 Session*

Students in the intern year are not included.

	Freshmen	Sophomores	Juniors	Seniors	Total	Total 1944-1945 Session
69 Medical Schools (U. S.)	5,796	5,511	5,729	5,655	22,691	23,481
8 Basic Science Schools (U. S.)	264	239	22*	.....	525	547
Total (U. S.)	6,060	5,750	5,751	5,655	23,216	24,028
9 Medical Schools (Canada)	838	665	590	421	2,523†	2,138‡
1 Basic Science School (Canada)	24	23	...	...	47	25
Total (Canada)	862	688	590	421	2,570†	2,163‡
Total U. S. and Canada	6,922	6,438	6,350	6,076	25,786	26,191

* At Medical College of Alabama.
† Does not include 363 premedical students and 40 fifth year students.
‡ Does not include 390 in the fifth and sixth years.

The number of students in a required intern year has not changed appreciably in the war years, although these wartime figures are considerably smaller than before the war, when more schools required an internship for the degree.

TABLE 12.—*Students in the Medical and Basic Science Schools in the United States by Years, Including the Intern Year When Required for Graduation, 1931-1946*

	Preclinical	Clinical		Required Intern Year	Total†
1930-1931	6,456	5,538	5,080	4,908	1,025	23,007
1931-1932	6,260	5,462	4,932	4,885	1,067	23,202
1932-1933	6,426	5,479	5,017	4,948	1,106	23,572
1933-1934	6,457	5,571	4,988	4,937	1,183	23,982
1934-1935	6,356	5,624	5,142	4,905	1,233	24,121
1935-1936	6,005	5,458	5,230	5,020	1,213	23,777
1936-1937	5,910	5,269	5,140	5,158	1,255	23,350
1937-1938	5,791	5,225	4,986	5,036	1,132	22,719
1938-1939	5,764	5,190	4,947	4,921	1,152	22,454
1939-1940	5,794	5,177	4,921	4,804	1,152	22,423
1940-1941	5,837	5,254	4,969	4,849	1,058	23,437
1941-1942	6,218	5,406	5,087	4,942	767	22,798
1942-1943	6,425	5,828	5,278	5,100	639	23,270
1943-1944	6,561	6,071	5,640	5,257	451	23,980
1944 (second session)	6,648	6,140	6,084	5,794	447	25,113
1944-1945	6,533	5,979	5,700	5,826	452	24,480
1945-1946	6,060	5,750	5,751	5,655	488	23,704

† Includes students in the required intern year.

It should be noted that prior to 1942-1943 the totals shown in table 12 are somewhat higher than the sum of the figures in the various classes. This resulted from certain schools being unable to classify their students strictly into the conventional graded classes, freshmen to senior.

GRADUATES

The last column of tables 8 (page 1284) and 9 (page 1286) gives the number of graduates for each medical school in the United States and Canada from July 1, 1945 to May 31, 1946. During this period there were 5,826 graduates in the United States and 513 in Canada. For four schools (Indiana, Tulane, Baylor and Marquette) the figures are for two graduating classes. Three schools in the United States (Stanford, Buffalo and Syracuse) had no graduations during this eleven month period. These three schools graduated a class in June 1946 and will do so again in June 1947. Next year's Educational Number will therefore present data on two graduating classes from these institutions. In Canada there was no graduating class at Dalhousie in the period covered in this report.

TABLE 13.—*Schools, Students and Graduates in the United States, 1905-1946*

Students in a required intern year not included.

	Schools	Students *	Graduates
1905	160	26,147	5,606
1910	131	21,526	4,440
1915	96	14,891	3,535
1920	85	15,798	3,047
1921	83	14,466	3,186
1922	81	15,635	2,529
1923	80	16,960	3,120
1924	79	17,728	3,562
1925	80	18,200	3,974
1926	79	18,840	3,962
1927	80	19,062	4,035
1928	80	20,345	4,262
1929	76	20,878	4,445
1930	76	21,497	4,565
1931	76	21,982	4,735
1932	76	22,135	4,956
1933	77	22,466	4,895
1934	77	22,709	5,035
1935	77	22,888	5,101
1936	77	22,564	5,183
1937	77	22,095	5,377
1938	77	21,587	5,191
1939	77	21,362	5,089
1940	77	21,271	5,097
1941	77	21,379	5,275
1942	77	22,031	5,163
1943	76	22,631	5,223
1944	77	23,529	5,134
1944 (second session)	77	24,656	5,169
1945 (to June 30)	77	24,028	5,136
1946 (to May 31)	77	23,216	5,826

* Includes figures for schools of the basic medical sciences.

TABLE 14.—*Schools, Students and Graduates by States Excluding Intern Year Students*

	Schools	Students, 1945-1946	Graduates, July 1, 1945 to May 31, 1946
Alabama	1	124	..
Arkansas	1	248	67
California	4	1,104	229
Colorado	1	232	54
Connecticut	1	244	59
District of Columbia	3	953	222
Georgia	2	523	132
Illinois	4	1,768	466
Indiana	1	350	183
Iowa	1	293	67
Kansas	1	291	75
Kentucky	1	351	91
Louisiana	2	784	327
Maryland	2	657	173
Massachusetts	3	1,149	304
Michigan	2	793	189
Minnesota	1	424	139
Mississippi	1	57	..
Missouri	3	913	217
Nebraska	2	369	134
New Hampshire	1	59	..
New York	9	3,095	631
North Carolina	3	564	118
North Dakota	1	54	..
Ohio	3	961	239
Oklahoma	1	281	69
Oregon	1	282	68
Pennsylvania	6	2,385	652
South Carolina	1	205	42
South Dakota	1	49	..
Tennessee	3	865	210
Texas	3	836	224
Utah	1	166	38
Vermont	1	151	37
Virginia	2	582	154
West Virginia	1	56	..
Wisconsin	2	632	238
Totals	77	23,216	5,826

TABLE 15.—*Residence of*

Marginal Number		1 Alabama	2 Arizona	3 Arkansas	4 California	5 Colorado	6 Connecticut	7 Delaware	8 District of Columbia	9 Florida	10 Georgia	11 Idaho	12 Illinois	13 Indiana	14 Iowa	15 Kansas	Marginal Number
1	Medical College of Alabama	29	..	..	2	..	..	..	..	2	1	..	1	1	..	..	1
2	University of Arkansas School of Medicine	1	..	41	9	..	..	..	..	..	..	..	1	..	1	..	2
3	University of California Medical School	..	..	..	69	..	..	..	..	..	..	..	1	..	..	..	3
4	College of Medical Evangelists	..	1	..	15	..	..	..	..	1	..	..	1	..	1	..	4
5	University of Southern California School of Medicine	..	..	..	49	..	1	..	..	1	..	1	1	..	..	..	5
6	Stanford University School of Medicine	..	1	..	48	..	..	..	..	..	..	1	2	..	..	..	6
7	University of Colorado School of Medicine	..	..	..	7	33	..	..	..	..	..	..	..	..	2	..	7
8	Yale University School of Medicine	..	..	..	3	..	6	..	1	2	..	..	3	..	1	..	8
9	Georgetown University School of Medicine	..	..	..	2	1	3	..	15	..	2	..	3	..	1	..	9
10	George Washington University School of Medicine	..	..	..	5	1	..	..	15	2	..	..	7	4	..	1	10
11	Howard University College of Medicine	3	..	..	..	1	..	..	4	5	4	..	2	1	1	..	11
12	Emory University School of Medicine	3	..	..	1	1	..	..	..	11	23	..	1	2	..	..	12
13	University of Georgia School of Medicine	1	..	1	1	..	..	..	..	2	49	..	3	3	..	1	13
14	Loyola University School of Medicine	1	..	..	2	..	1	..	..	..	..	..	34	8	..	..	14
15	Northwestern University Medical School	..	1	..	6	1	1	..	1	..	1	1	43	5	3	3	15
16	University of Chicago, The School of Medicine	..	..	..	2	1	1	..	..	..	..	2	19	4	..	1	16
17	University of Illinois College of Medicine	..	1	1	4	2	..	..	..	..	..	..	131	4	3	1	17
18	Indiana University School of Medicine	..	..	..	2	..	..	..	..	..	..	..	2	63	..	..	18
19	State University of Iowa College of Medicine	1	..	..	3	..	2	..	..	..	..	..	7	..	46	..	19
20	University of Kansas School of Medicine	..	1	1	3	1	1	1	..	..	..	..	2	1	..	38	20
21	University of Louisville School of Medicine	..	..	..	5	..	..	..	..	2	..	..	2	2	..	1	21
22	Louisiana State University School of Medicine	2	..	..	13	..	..	..	2	..	1	..	2	1	1	..	22
23	Tulane University of Louisiana School of Medicine	10	..	4	12	1	1	..	..	7	..	..	3	..	2	1	23
24	Johns Hopkins University School of Medicine	..	1	1	4	..	1	..	..	..	1	..	3	..	2	..	24
25	University of Maryland School of Medicine	1	..	..	4	..	1	1	2	1	3	..	2	3	..	..	25
26	Boston University School of Medicine	..	..	1	4	..	3	..	..	..	..	..	3	..	..	..	26
27	Harvard Medical School	..	1	1	9	..	2	..	3	..	..	..	3	3	..	..	27
28	Tufts College Medical School	..	..	..	1	..	7	..	..	2	1	..	5	..	1	1	28
29	University of Michigan Medical School	..	..	..	2	1	..	..	..	1	1	1	5	1	1	..	29
30	Wayne University College of Medicine	..	..	..	3	..	..	..	..	..	..	..	2	4	2	1	30
31	University of Minnesota Medical School	..	..	..	1	1	..	..	..	..	..	1	5	1	3	2	31
32	University of Mississippi School of Medicine	..	..	..	2	..	..	..	..	..	..	..	..	..	1	..	32
33	University of Missouri School of Medicine	..	..	..	3	..	..	..	..	..	..	..	3	..	..	..	33
34	St. Louis University School of Medicine	..	1	..	12	5	..	..	..	2	..	..	8	4	..	2	34
35	Washington University School of Medicine	..	..	2	3	3	1	..	..	..	1	1	9	..	2	..	35
36	Creighton University School of Medicine	..	..	..	3	..	3	..	..	..	..	..	3	..	9	1	36
37	University of Nebraska College of Medicine	..	..	..	8	2	..	..	..	..	..	..	2	..	7	1	37
38	Dartmouth Medical School	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	38
39	Albany Medical College	..	..	..	2	..	..	..	..	..	..	1	..	1	..	..	39
40	Long Island College of Medicine	..	..	..	..	..	1	..	1	..	1	1	3	1	..	1	40
41	University of Buffalo School of Medicine	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	41
42	Columbia University College of Physicians and Surgeons	..	..	..	..	1	1	..	1	1	..	..	7	1	1	..	42
43	Cornell University Medical College	..	..	..	4	1	1	1	..	2	..	..	2	..	1	1	43
44	New York Medical College	..	..	..	6	..	10	1	2	..	..	..	2	2	..	..	44
45	New York University College of Medicine	..	..	..	2	..	3	..	..	..	1	..	2	2	..	..	45
46	University of Rochester School of Medicine and Dentistry	..	..	..	2	..	4	1	1	..	..	1	1	1	..	..	46
47	Syracuse University College of Medicine	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	47
48	University of North Carolina School of Medicine	..	..	..	..	..	1	..	1	2	1	..	..	1	..	..	48
49	Duke University School of Medicine	..	1	..	1	..	..	..	1	4	..	..	6	..	..	..	49
50	Bowman Gray School of Medicine	..	..	..	1	..	..	..	..	1	1	..	4	..	1	..	50
51	University of North Dakota School of Medicine	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	51
52	University of Cincinnati College of Medicine	..	..	..	3	..	..	..	..	..	..	..	2	1	..	..	52
53	Western Reserve University School of Medicine	..	..	..	6	1	..	..	..	..	..	1	5	..	2	2	53
54	Ohio State University College of Medicine	..	..	..	2	..	1	..	..	1	..	..	3	2	..	..	54
55	University of Oklahoma School of Medicine	..	..	..	6	1	..	..	..	..	..	..	..	..	1	1	55
56	University of Oregon Medical School	..	..	..	2	1	..	..	..	..	..	9	4	..	1	..	56
57	Hahnemann Medical College	7	1	..	7	1	..	..	..	..	..	2	..	..	..	..	57
58	Jefferson Medical College of Philadelphia	1	..	..	..	..	1	3	1	..	..	..	3	1	1	2	58
59	Temple University School of Medicine	..	..	..	3	..	2	1	..	2	..	..	5	..	..	..	59
60	University of Pennsylvania School of Medicine	..	1	1	3	1	..	1	1	..	1	1	1	1	2	..	60
61	Woman's Medical College of Pennsylvania	..	..	..	3	..	..	..	1	1	1	..	1	..	..	..	61
62	University of Pittsburgh School of Medicine	..	..	..	4	..	1	..	1	..	..	..	2	..	..	..	62
63	Medical College of the State of South Carolina	..	..	..	..	1	..	..	..	6	1	..	2	..	1	1	63
64	University of South Dakota School of Medical Sciences	..	..	..	1	1	..	..	..	..	..	1	1	1	..	..	64
65	University of Tennessee College of Medicine	5	..	3	2	1	1	..	..	1	3	..	2	..	2	1	65
66	Meharry Medical College	5	..	1	1	..	..	1	..	1	2	..	4	2	..	..	66
67	Vanderbilt University School of Medicine	4	1	1	2	..	..	..	..	2	..	..	..	..	..	..	67
68	Southwestern Medical College	..	2	1	3	1	..	..	..	1	..	..	..	..	2	..	68
69	Baylor University College of Medicine	..	2	..	7	1	1	..	1	2	..	1	1	..	3	2	69
70	University of Texas School of Medicine	..	2	1	5	..	1	..	..	..	..	1	2	..	1	1	70
71	University of Utah School of Medicine	1	1	..	2	..	..	..	..	..	..	1	..	..	1	1	71
72	University of Vermont College of Medicine	..	..	..	1	..	6	..	1	..	..	..	..	..	1	..	72
73	University of Virginia Department of Medicine	1	1	..	..	..	..	..	1	2	1	..	3	1	1	..	73
74	Medical College of Virginia	..	..	..	2	..	2	..	1	2	2	..	..	4	..	1	74
75	West Virginia University School of Medicine	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	75
76	University of Wisconsin Medical School	..	..	..	2	1	1	..	..	1	1	1	1	..	1	..	76
77	Marquette University School of Medicine	..	..	1	5	..	1	..	1	..	..	..	9	2	..	..	77
78	University of Alberta Faculty of Medicine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	78
79	University of Manitoba Faculty of Medicine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	79
80	Dalhousie University Faculty of Medicine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	80
81	Queen's University Faculty of Medicine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	81
82	University of Western Ontario Medical School	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	82
83	University of Toronto Faculty of Medicine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	83
84	McGill University Faculty of Medicine	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	84
85	University of Montreal Faculty of Medicine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	85
86	Laval University Faculty of Medicine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	86
87	University of Saskatchewan School of Medical Sciences	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	87
	Totals	70	19	63	406	68	77	10	59	72	105	30	404	140	115	71	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	

V 13
1946

Freshman Students, 1945-1946

Marginal Number	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan	Minnesota	Mississippi	Missouri	Montana	Nebraska	Nevada	New Hampshire	New Jersey	New Mexico	New York	North Carolina	North Dakota	Ohio	Oklahoma	Oregon	Pennsylvania	Rhode Island	South Carolina	South Dakota	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin	Wyoming	U. S. Territories and Possessions	Canada	Foreign	Totals	Marginal Number
1	..	1	..	..	2	..	..	1	..	..	..	..	..	1	..	2	..	..	..	..	1	3	..	..	..	1	..	..	..	..	3	..	2	..	..	..	..	53	1
2	2	1	..	..	..	2	..	..	1	..	..	..	..	..	..	2	..	..	..	1	..	..	..	..	..	2	3	..	..	..	..	..	..	..	5	..	..	73	2
3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	2	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	1	68	3
4	..	..	..	1	1	3	..	1	1	3	..	..	..	3	..	1	..	1	4	1	1	..	..	..	..	1	2	..	..	..	5	..	4	..	4	1	11	69	4
5	..	..	..	..	..	1	..	..	1	..	1	..	..	..	1	..	..	..	2	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	1	63	5
6	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	6	..	..	..	..	..	1	62	6
7	..	..	..	1	1	..	..	..	3	3	..	..	..	1	2	1	..	..	1	..	1	1	..	..	..	..	..	5	..	..	1	..	1	1	..	..	..	65	7
8	..	..	..	1	9	4	1	..	..	..	..	..	..	1	8	..	..	..	3	1	..	4	..	..	..	1	1	..	..	..	1	..	3	..	..	..	2	56	8
9	..	..	..	5	2	1	..	..	..	..	1	..	1	6	..	23	..	..	7	..	..	10	..	..	..	..	1	..	..	5	2	..	1	..	3	..	4	99	9
10	..	..	..	7	3	6	..	1	..	..	..	..	..	2	..	4	..	..	9	1	1	4	1	..	..	1	..	..	..	..	6	3	..	..	..	..	..	84	10
11	..	3	..	3	..	..	..	1	1	..	..	..	..	3	..	10	9	..	2	1	1	3	..	4	..	2	2	..	..	4	..	3	..	..	..	..	2	75	11
12	..	..	..	..	1	1	1	1	..	..	..	..	..	1	1	1	2	..	1	..	..	2	..	1	..	2	..	..	..	1	..	..	1	..	..	..	1	60	12
13	1	..	..	..	..	1	..	..	1	..	..	..	..	1	..	3	1	..	1	..	..	2	..	1	..	..	1	1	..	..	..	..	1	..	..	..	..	76	13
14	..	..	..	1	..	5	1	..	2	..	..	..	..	..	..	10	..	1	10	..	2	3	1	..	1	1	..	..	..	..	..	..	..	1	3	..	..	88	14
15	1	..	..	1	..	2	4	..	4	1	5	..	..	..	..	4	2	..	11	2	1	3	1	..	..	1	3	1	..	..	8	1	3	..	4	..	2	134	15
16	1	..	..	1	..	3	1	..	1	..	..	..	..	2	1	4	1	..	6	..	..	3	..	..	..	1	1	1	..	..	4	1	3	..	..	..	..	65	16
17	..	..	1	..	2	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	1	..	2	..	..	..	2	..	2	1	1	..	164	17
18	1	..	..	..	..	2	..	..	..	..	..	..	..	2	..	3	..	..	3	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	81	18
19	..	..	..	..	..	3	5	..	..	..	..	..	..	..	..	5	..	..	1	..	1	2	..	..	2	..	1	1	..	..	1	..	1	..	..	..	..	82	19
20	..	..	..	1	..	3	1	..	7	1	..	..	..	1	3	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	2	..	2	..	..	..	..	74	20
21	31	..	..	1	2	1	3	1	1	1	..	..	..	1	..	12	..	..	6	2	3	..	..	..	1	2	..	..	..	..	1	2	2	..	2	..	..	86	21
22	..	37	..	..	1	2	..	4	..	..	2	..	..	1	1	5	..	..	2	..	..	..	..	..	1	1	1	..	1	..	1	1	..	..	..	..	..	82	22
23	3	18	..	1	..	1	1	5	1	..	1	..	..	1	..	4	..	..	1	6	2	3	..	1	..	7	13	..	..	1	2	1	1	..	5	..	6	125	23
24	1	..	..	7	..	..	..	1	1	..	..	..	..	2	..	11	1	..	9	1	..	9	..	1	..	2	..	..	2	2	1	5	..	..	..	1	70	24
25	..	..	..	23	1	2	1	..	1	..	2	..	..	2	..	4	4	..	2	..	1	12	1	..	..	..	1	1	..	4	..	2	..	..	..	..	82	25
26	3	..	3	..	36	1	..	..	..	1	..	..	1	4	6	..	2	..	2	2	2	2	..	..	..	..	1	..	..	..	1	..	1	1	2	..	..	69	26
27	3	..	..	19	5	4	..	2	..	1	..	1	4	1	18	1	..	4	1	..	10	2	..	..	2	4	1	2	..	..	3	..	..	..	..	2	135	27
28	1	..	1	..	41	3	..	..	..	..	..	..	3	2	..	7	1	..	4	..	..	5	12	1	..	..	..	1	1	1	1	..	1	..	..	..	104	28
29	1	..	..	1	3	47	5	..	2	..	3	..	1	4	..	13	1	..	12	1	2	3	..	2	..	1	2	..	..	1	2	1	..	1	..	2	124	29
30	..	..	..	..	1	35	1	..	..	..	..	..	..	..	..	7	..	..	6	..	..	2	..	..	..	..	1	..	..	..	..	..	1	1	..	..	67	30
31	..	..	..	..	3	69	..	..	2	..	..	..	..	1	..	5	..	1	1	..	1	1	..	..	1	1	..	..	..	..	2	..	5	1	..	..	99	31
32	..	..	..	..	..	1	22	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	29	32
33	..	..	..	..	4	1	..	22	..	..	..	..	..	..	..	4	..	..	1	..	1	1	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	40	33
34	..	1	..	1	..	3	1	..	16	4	..	..	..	1	..	10	1	1	10	1	1	3	..	..	..	1	1	1	..	1	5	..	4	1	2	..	104	34
35	..	..	..	..	2	2	2	2	32	2	2	..	..	1	1	3	..	..	4	4	1	1	..	..	..	..	..	..	..	..	1	..	2	..	3	..	..	87	35
36	1	..	..	1	3	1	4	..	3	..	10	..	..	2	..	4	..	..	2	..	3	1	..	..	1	..	..	..	..	..	1	1	3	..	1	..	..	61	36
37	..	..	..	..	..	..	3	..	1	4	27	1	..	1	..	7	..	..	7	..	4	1	1	..	1	..	..	..	..	..	4	..	2	..	..	..	..	85	37
38	..	..	..	..	1	..	..	..	..	..	..	..	3	1	..	1	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12	38
39	..	..	1	..	..	..	..	..	..	..	..	..	..	4	..	29	..	..	..	..	..	4	..	..	..	..	1	..	1	..	..	..	..	..	..	1	46	39
40	..	..	1	..	3	1	1	..	..	..	..	..	..	12	..	69	..	..	5	..	..	7	..	..	..	..	1	1	..	1	..	1	..	..	..	..	112	40
41	..	..	..	..	1	1	..	..	..	..	..	..	..	2	..	59	..	..	1	..	..	2	..	..	..	..	1	..	..	..	..	..	..	2	1	2	73	41
42	..	..	..	1	9	1	..	..	1	..	..	..	..	17	..	53	..	..	5	..	..	7	..	1	..	..	1	1	2	..	..	..	..	..	..	..	114	42
43	..	..	1	1	4	5	1	..	..	..	..	..	1	11	..	25	..	..	3	..	1	8	..	..	1	3	..	1	..	..	1	..	..	..	..	..	..	80	43
44	..	..	..	1	4	1	..	..	..	..	..	..	..	16	..	67	..	..	3	..	..	6	4	..	..	..	..	..	..	..	..	2	..	..	1	..	128	44
45	..	..	..	3	7	..	..	..	..	..	2	..	..	12	..	32	..	..	4	..	..	6	..	..	..	..	..	1	2	..	1	2	1	..	..	2	121	45
46	..	1	..	1	2	..	1	..	1	2	..	..	1	4	..	26	..	2	2	..	..	3	1	..	1	..	..	1	1	..	1	1	1	..	1	..	..	65	46
47	..	..	..	..	2	1	..	..	..	..	..	..	..	6	..	41	..	..	..	..	..	4	..	..	..	..	1	..	..	..	..	..	..	..	2	..	..	58	47
48	..	..	..	..	3	..	..	1	..	..	..	..	2	1	..	2	28	..	2	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	47	48
49	1	1	..	1	1	2	..	2	1	..	1	..	..	2	..	6	15	..	6	2	..	2	..	5	..	5	1	..	..	3	..	..	2	..	..	..	..	72	49
50	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	21	..	2	..	..	3	..	5	..	1	..	..	..	..	1	2	..	..	..	..	51	50
51	..	..	..	..	1	2	..	..	..	3	..	..	..	..	..	4	..	16	..	..	..	1	..	..	..	1	..	..	..	2	..	..	..	1	..	..	29	51
52	10	..	..	1	1	3	4	..	..	..	..	..	..	2	..	4	..	1	50	1	..	4	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	88	52
53	..	..	..	..	2	1	1	..	1	..	..	..	..	1	..	8	1	..	42	2	..	3	..	..	1	..	..	..	..	..	1	..	1	..	..	2	84	53
54	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	61	..	..	7	..	..	..	..	..	..	..	..	..	..	1	..	..	..	83	54
55	..	..	..	..	1	..	..	..	3	1	1	..	1	..	..	4	..	..	1	48	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	72	55
56	..	..	..	..	..	..	..	..	..	2	..	..	..	2	..	1	..	..	..	1	31	..	..	..	..	..	1	1	..	..	17	..	..	..	..	..	73	56
57	..	..	..	3	2	..	..	..	1	..	..	..	1	10	..	16	..	..	..	..	..	53	..	..	..	..	..	..	..	..	..	..	6	..	..	..	105	57
58	1	..	..	1	6	3	1	..	1	..	2	..	1	14	..	11	..	..	3	..	..	78	1	..	..	..	..	..	4	3	2	4	1	4	..	..	154	58
59	2	..	2	2	3	3	1	..	..	..	1	..	1	8	..	9	1	..	7	..	..	47	..	1	1	2	..	..	2	1	3	..	7	..	..	..	117	59
60	1	1	..	2	2	1	..	..	..	..	..	..	..	11	..	12	3	1	7	..	..	30	..	2	..	1	6	..	2	..	1	1	2	..	..	1	131	60
61	..	..	1	..	..	1	..	..	1	..	..	..	..	3	..	9	..	..	2	..	2	18	..	..	..	..	..	1	..	1	..	..	..	1	..	..	47	61
62	..	..	..	1	1	2	..	..	..	..	..	..	..	..	..	3	1	1	6	1	..	60	..	..	..	..	..	..	..	..	..	1	1	..	..	..	86	62
63	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	3	..	..	2	..	..	..	..	..	39	..	..	..	..	..	..	2	..	..	..	..	59	63
64	..	..	1	..	1	1	..	..	..	1	..	..	..	1	..	3	..	..	..	..	..	2	..	..	9	..	1	1	..	1	1	..	1	..	..	..	24	64
65	7	5	..	1	2	1	6	7	..	..	..	..	..	..	..	3	1	..	4	..	1	2	..	2	..	52	11	1	..	1	4	1	..	5	1	1	139	65
66	2	3	..	1	..	..	2	2	..	..	..	..	..	2	..	2	3	..	4	1	..	2	..	3	..	3	2	..	..	..	1	..	..	1	..	..	51	66
67	4	..	..	1	1	2	..	1	1	..	..	..	..	3	..	5	..	..	..	..	..	2	..	1	..	12	3	..	..	..	1	..	..	2	..	..	51	67
68	..	..	..	1	..	..	1	1	..	..	..	..	1	..	3	..	..	..	..	6	1	..	..	..	1	..	37	..	..	..	1	..	..	..	..	..	66	68
69	..	1	..	..	3	2	1	..	..	1	..	..	..	4	1	..	3	1	..	1	..	1	..	..	..	..	44	..	..	..	1	..	..	1	..	..	82	69
70	..	..	..	2	2	..	..	..	1	1	1	..	..	1	..	2	1	1	..	..	..	1	1	1	..	..	65	1	1	..	2	1	..	..	..	..	98	70
71	..	..	..	..	..	2	2	..	..	..	2	..	..	..	..	5	..	..	..	..	..	..	..	..	..	..	..	30	..	..	..	..	..	..	..	..	48	71
72	..	..	..	3	1	..	..	..	..	..	..	..	2	2	..	8	..	..	1	..	..	..	..	..	..	..	1	11	..	..	..	..	1	..	..	..	40	72
73	1	1	..	2	1	1	..	1	..	1	..	..	..	3	..	6	1	..	1	2	1	3	..	2	1	3	1	..	..	14	..	1	2	..	3	..	66	73
74	..	..	..	1	1	1	..	..	..	..	..	..	..	2	..	3	3	..	1	..	..	4	1	..	3	1	..	..	..	31	2	9	..	..	2	..	1	80	74
75	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	1	..	..	..	..	..	..	..	3	..	18	..	..	..	..	30	75
76	..	..	..	1	..	..	2	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	51	..	..	1	65	76
77	..	..	..	..	3	7	5	..	1	..	..	..	..	5	..	6	1	..	3	1	..	7	1	..	..	..	2	2	..	1	1	..	24	..	5	..	2	98	77
78	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	37	..	37	78
79	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	61	..	61	79
80	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	41	11	52	80
81	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	61	..	61*	81
82	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	63	..	63	82
83	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	260	2	262*	83
84	..	..	..	1	..	2	..	..	..	..	..	..	1	..	..	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	125	9	144	84
85	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	104	..	104	85
86	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	154	1	157	86
87	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	24	..	24	87
	84	74	14	79	184	207	129	52	129	30	75	2	21	210	11	799	105	26	367	91	64	512	28	72	20	110	228	61	26	84	107	59	164	6	84	974	74	7,065	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	

* Figures are for students in beginning premedical year.

In the United States there were more than 150 graduates from three schools: Illinois (185), Northwestern (155) and Jefferson (155). These figures are for one graduating class. Indiana, Tulane and Marquette, with 183, 260 and 164 graduates respectively, do not belong in the same category, since these figures are the totals for two graduating classes.

The fewest graduates were at Woman's Medical (36), Vermont (37) and Utah (38). There were five other schools graduating fewer than 50 students: South Carolina (42), Albany (44), Bowman Gray (47), Vanderbilt (47) and Southwestern (48).

In Canada the most graduates were at Toronto (131) and McGill (101). The smallest number (20) graduated from Alberta.

The total students and graduates per academic year since 1905 are reported in table 13. In the academic year 1945-1946 there were 5,826 graduates, more than at any time since the Council on Medical Education and Hospitals was established. This number, it is true, includes the figures for two graduating classes in four schools. But even if this is taken into account the figure would still remain the highest in over forty years. Thus, although the peak in medical school enrolments was reached in the 1944 "second session," we are just now at the peak of numbers of graduates or will reach the maximum within a year.

The increased number of graduates in an academic year has nothing to do with the accelerated program. It is a reflection of the wartime policy of admitting more students to our medical schools. For discussion of the effects of acceleration itself on the number of graduates see "Accomplishments of Acceleration," page 1279.

STUDENTS AND GRADUATES BY STATES

The seventy-seven medical schools and schools of the basic medical sciences in the United States are located in thirty-six states and the District of Columbia. The numbers of approved schools, students enrolled in 1945-1946 and graduates from July 1, 1945 to May 31, 1946 are shown in table 14. In each of five states enrolments exceeded 1,000: New York (3,095), Pennsylvania (2,585), Illinois (1,768), Massachusetts (1,149) and California (1,104). These five states have 38 per cent of the four year medical schools of this country, enrolled 42 per cent of the students in medical schools in 1945-1946 and accounted for 39 per cent of the medical graduates in the United States. Four of these states graduated more than 300 students: Pennsylvania (652), New York (631), Illinois (466) and Massachusetts (304). In none of these states were there two graduating classes. The large number of graduates in Louisiana, 327, was due to the graduation of 260 students from Tulane in two classes.

The fewest graduates were in Vermont (37) and Utah (38). Each of these states has but one medical school, with relatively few students. There are six states listed with no graduates, since those states have only schools of the basic medical sciences, except for Alabama, whose four year school has had no graduating class thus far.

GEOGRAPHIC SOURCES OF FRESHMAN STUDENTS, 1945-1946

In table 15 is indicated the residence of freshman students in the 1945-1946 freshman class of each medical and basic science school in the United States and Canada. It is admitted that the residence of certain students may be of brief duration, so that their real geographic sources may not be revealed by their residence on entering medical school. On the other hand, the birthplace of students is probably no better as a criterion of geographic origin, since appreciable numbers of people have permanent residence elsewhere than in states of their birth.

Included in this table are 6,060 students in the United States and 1,005 in Canada, or 7,065 in all. The figure for Canadian students is somewhat higher than the freshman enrolment figures given in preceding tables because table 15 employs the figure for the first class of premedical students at Queen's and Toronto, since these students are already registered in those Canadian schools.

The five states providing the most freshman medical students to the 1945-1946 class were New York with 799, Pennsylvania with 512, California with 406, Illinois with 404 and Ohio with 367. These five states provided a total of 2,488 freshmen, or 35 per cent of all the freshmen in the last class in the medical and basic science schools in the United States and Canada. The twenty-six schools in these five states provided freshman places for 2,405 students, or 34 per cent of those enrolled in all schools. The six states supplying the fewest freshmen were Nevada (2), Wyoming (6), Delaware (10), New Mexico (11), Maine (14) and Arizona (19). Every medical school in the United States accepted some out of state students for the 1945-1946 freshman class.

TABLE 16.—*Enrolment of Freshman Students from States in Which There Are No Medical Schools, 1945-1946*

	Students Enrolled	Number of Schools	School with Greatest Number from State and Number of Students
Arizona	19	16	Southwestern 2; Baylor 2; Texas 2
Delaware	10	8	Jefferson 3
Florida	72	30	Emory 11
Idaho	30	29	Oregon 9
Maine	14	11	Boston 3
Montana	30	16	St. Louis 4; Nebraska 4
Nevada	2	2	Stanford 1; Nebraska 1
New Jersey	216	55	Columbia 17
New Mexico	11	10	Colorado 2
Rhode Island	28	12	Tufts 12
Washington	107	42	Oregon 17
Wyoming	6	6	Colorado 1; Loyola 1; Minnesota 1; St. Louis 1; Jefferson 1; Pittsburgh, 1
Totals	539		

Of the 1,005 beginning students in Canada, only 13 came from the United States and its possessions, while in the schools of the United States there were only 5 freshmen from Canada. It is hoped that the more extensive exchanges of students between these neighbor countries which existed before the war will occur again in the near future.

There were 84 freshman students from the territories and possessions of the United States, only 1 of whom was enrolled in Canada.

A total of 74 students from foreign countries enrolled in freshman classes, 51 in the schools of this country and 23 in Canada. The most foreign students were enrolled at the College of Medical Evangelists and at Dalhousie, with 11 each.

There are twelve states in this country in which no medical or basic science school is located. These are listed in table 16, which also indicates the number of freshmen from these states enrolled elsewhere, as well as the number of schools they entered. There were 539 such freshmen, nearly 60 per cent of whom were from the states of New Jersey and Washington. From

V 13
1946

New Jersey there were 210 freshmen in fifty-five schools. The greatest number of these, 17, was admitted to Columbia. Residents from the state of Washington, numbering 107, entered forty-two medical schools, with Oregon admitting 17, the largest number at any one school.

The claim is repeatedly made that men and women in states lacking a medical school find difficulty gaining admission to a school in another state. This statement is often made in justification for establishing new medical schools in states now lacking them. The facts do not bear out this opinion. In the freshman classes of 1945-1946 there were 4.5 students per hundred thousand of the population from states having a medical school. Almost the same number, 4.4 freshmen per hundred thousand people, entered schools from states without a medical school. In the preceding freshman class (1944-1945) states with and states without medical schools sent identical proportions of their populations to the various medical schools. These figures suggest that those students from states lacking a school have as good a chance for admission as do students residing in a state which does have a medical school within its borders. Justification for developing a new medical school must rest on other grounds.

REQUIRED INTERNSHIPS

The medical schools requiring an internship for the M.D. degree are shown in table 17. There are six schools in the United States and four in Canada with this requirement. There has been no change in this list in the past three years. In the academic year 1945-1946 there were 488 students of schools in the United States and 156 from Canadian schools, a total of 644, engaged in the required year of internship training or research.

States requiring the internship for licensure are given in table 18. There are twenty-three such states plus the Arkansas and Connecticut homeopathic boards, the District of Columbia, Alaska, Hawaii, Puerto Rico and the Canal Zone. This table also indicates the relationship of the internship requirement to the wartime nine month internship. At least for the emergency period ten states, the Connecticut homeopathic board, Alaska,

TABLE 17.—*Medical Schools Requiring an Internship*

United States
College of Medical Evangelists
University of Southern California School of Medicine
Stanford University School of Medicine
Northwestern University Medical School
University of Minnesota Medical School
Duke University School of Medicine *
Canada
University of Alberta Faculty of Medicine
University of Manitoba Faculty of Medicine
Dalhousie University Faculty of Medicine
University of Montreal Faculty of Medicine

* Degree not withheld until internship completed.

the Canal Zone, Hawaii and Puerto Rico will accept the shortened internship as meeting the licensure requirements. Eleven states and the District of Columbia require an additional three months in a civilian hospital or in military service and will permit applicants to write the licensure examination on completion of the nine month internship but will withhold the license until such service is completed. In only two states and the Arkansas homeopathic board must the applicant complete the full year of internship, three months of which may be in the military service, before he may take the licensure examination. Five states (Alabama, Illinois, Oregon, South Dakota and Utah) require the additional three months of military service to be in a military hospital.

Five states (Connecticut, Maryland, Missouri, Texas and Virginia) whose laws do not require an internship

TABLE 18.—*Relationship of the Nine Month Internship to Licensure*

Accepted as Fulfilling Internship Requirement	Additional Three Months in Civilian Hospital or Military Service Required	
	Will Give Examination at End of Nine Months	Will Not Give Examination Until Completion of Year's Service
Alaska	Alabama [1,2]	Arkansas (homeo. board)
Canal Zone	Delaware	Illinois [2]
Connecticut (homeo. board)	Dist. of Columbia [1]	New Mexico
Hawaii	North Dakota	
Idaho	Oregon [1,2]	
Iowa [1]	Rhode Island [1]	
Michigan [1]	South Dakota [1,2]	
Montana [1]	Utah [1,2]	
Nevada	Vermont [1]	
New Jersey	Washington [1]	
New Hampshire	Wisconsin	
Oklahoma [1]	Wyoming	
Pennsylvania [1]		
Puerto Rico		
West Virginia		

1. Will also give examination on completion of the medical course but withhold license until internship is completed.
2. Military medical service must be in a military hospital.

Some states require the internship of graduates of medical faculties abroad and reciprocity or endorsement applicants.

Alabama, Delaware, Illinois, Iowa, Michigan, North Dakota, Pennsylvania, Rhode Island, Utah, Washington and Wisconsin require the internship to be a rotating service, while New Jersey recommends this type of service.

withhold the licenses of candidates from schools requiring an internship for the M.D. degree until the internship is completed. In these states the examination may be taken at any time after completion of the medical school course.

Some states require an internship of graduates from schools abroad and applicants for reciprocity or endorsement. The medical boards of eleven states (see footnote, table 18) require a rotating type of internship.

The list of hospitals approved for intern training by the Council on Medical Education and Hospitals of the American Medical Association (see pages 1311 to 1321, this issue) is generally acceptable in those states requiring an internship for licensure.

DISTRIBUTION BY SEX

Students enrolled in 1945-1946 and graduates from July 1, 1945 to May 31, 1946 are classified according to sex for all medical and basic science schools in the United States and Canada in table 19. The enrolment was 24,086 men and 2,103 women, and graduates numbered 6,060 men and 279 women. Only four schools of the eighty-seven had no women students: Georgetown, St. Louis, Dartmouth and Jefferson. None of these schools has admitted women in recent years. Harvard, which has traditionally not enrolled women, had twelve women in school in 1945-1946 and has selected a number for the freshman class entering in 1946. All Canadian schools reported women students in the last academic year.

Women students in the United States numbered 1,868, as compared with 21,348 men. In Canada there were 235 women and 2,738 men students. In the Woman's Medical College there were 162 women and 36 graduates. Seventeen other schools in the United States (as compared with seven in 1944-1945) had

more than thirty women enrolled. These schools were California, Howard, Illinois, Louisiana, Tufts, Michigan, Minnesota, Washington, Columbia, New York

TABLE 19.—*Distribution by Sex in the United States and Canada*

	Students, 1945-1946		Graduates, July 1, 1945 to May 31, 1946	
	Men	Women	Men	Women
Medical College of **Alabama**	108	16	..	..
University of **Arkansas**	227	21	67	0
University of **California**	298	38	68	5
College of Medical Evangelists	311	28	87	6
University of Southern California	241	12	60	3
Stanford University	208	28	0	0
University of **Colorado**	214	18	52	2
Yale University, **(Connecticut)**	221	23	56	3
Georgetown University, **(Dist. of Columbia)**	354	0	81	0
George Washington University	300	25	79	4
Howard University	243	31	55	3
Emory University, **(Georgia)**	294	13	63	1
University of Georgia	273	13	66	2
Loyola University, **(Illinois)**	289	20	65	3
Northwestern University	340	25	153	2
Univ. of Chicago, The School of Med.	231	16	55	3
University of Illinois	576	71	178	7
Indiana University	329	30	177	6
State University of **Iowa**	272	21	64	3
University of **Kansas**	365	26	71	4
University of Louisville, **(Kentucky)**	395	16	89	2
Louisiana State University	274	36	61	6
Tulane University of Louisiana	447	27	257	3
Johns Hopkins University, **(Maryland)**	275	23	72	4
University of Maryland	337	22	94	3
Boston University, **(Massachusetts)**	229	18	59	1
Harvard Medical School	480	12	141	0
Tufts College	370	40	98	5
University of **Michigan**	485	58	128	8
Wayne University	258	14	49	4
University of **Minnesota**	304	33	121	5
University of **Mississippi**	51	6	..	..
University of **Missouri**	57	6	..	..
St. Louis University	489	0	124	0
Washington University	328	33	86	7
Creighton University, **(Nebraska)**	228	14	55	4
University of Nebraska	395	13	74	1
Dartmouth Med. School, **(New Hampshire)**	30	0	..	..
Albany Medical College, **(New York)**	163	20	40	4
Long Island College of Medicine	381	38	98	3
University of Buffalo	287	19	0	0
Columbia University	411	47	109	4
Cornell University	287	28	79	1
New York Medical College	407	51	99	6
New York University	463	32	127	5
University of Rochester	234	24	63	2
Syracuse University	163	26	0	0
University of **North Carolina**	81	11	..	..
Duke University	304	18	67	4
Bowman Gray School of Medicine	181	9	46	1
University of **North Dakota**	52	2	..	..
University of Cincinnati, **(Ohio)**	291	31	70	6
Western Reserve University	311	17	81	1
Ohio State University	289	22	67	5
University of **Oklahoma**	257	24	66	3
University of **Oregon**	261	21	65	3
Hahnemann Med. College, **(Pennsylvania)**	466	43	118	7
Jefferson Medical College	655	0	155	0
Temple University	436	38	123	2
University of Pennsylvania	490	26	128	5
Woman's Medical College	0	162	0	36
University of Pittsburgh	291	28	76	2
Medical College of **South Carolina**	196	9	42	0
University of **South Dakota**	48	1	..	..
University of **Tennessee**	418	25	97	2
Meharry Medical College	209	23	60	4
Vanderbilt University	181	9	44	3
Southwestern Medical College, **(Texas)**	182	21	47	1
Baylor University	259	16	87	1
University of Texas	324	34	82	6
University of **Utah**	158	8	38	0
University of **Vermont**	137	14	35	2
University of **Virginia**	247	10	63	2
Medical College of Virginia	293	32	86	3
West Virginia University	47	9	..	..
University of **Wisconsin**	229	37	66	8
Marquette University	343	23	164	0
University of Alberta, **(Canada)**	100	11	18	2
University of Manitoba	225	22	48	8
Dalhousie University	162	5	0	0
Queen's University	237	12	41	0
University of Western Ontario	161	15	35	3
University of Toronto	751	109	121	10
McGill University	323	27	91	10
University of Montreal	283	14	55	1
Laval University	408	11	67	3
University of Saskatchewan	38	9	..	..
Totals	24,086	2,103	6,060	279

Medical, New York University, Cincinnati, Hahnemann, Temple, Texas, Medical College of Virginia and Wisconsin. In Canada, Toronto had 109 women students, which is more than in any school in either country with the exception of Woman's Medical College.

There were 279 women graduates in the period from July 1, 1945 to May 31, 1946 from sixty-five of the seventy-eight four year schools in both countries. Graduates numbered 242 women and 5,584 men in the United States and 37 women and 476 men in Canada. The largest number of women graduates was from the Woman's Medical College, with 36. Only two other schools graduated as many as ten women, Toronto and McGill.

Table 20 shows the distribution by sex of students and graduates in the United States and Canada for the past twelve academic sessions. The 1945-1946 enrol-

TABLE 20.—*Distribution by Sex in the United States and Canada, 1936-1946*

	Students		Graduates	
Year	Male	Female	Male	Female
1935-1936	24,219	1,254	5,388	268
1936-1937	23,787	1,244	5,624	261
1937-1938	23,234	1,307	5,439	232
1938-1939	22,919	1,293	5,290	285
1939-1940	22,993	1,291	5,430	273
1940-1941	22,853	1,308	5,327	310
1941-1942	21,551	1,233	5,397	365
1942-1943	24,183	1,317	5,450	271
1943-1944	25,113	1,379	5,390	267
1944 (Second session)	24,830	1,242	5,385	282
1944-1945 (to June 30)	25,001	1,380	5,178	279
1945-1946 (to May 31)	24,086	2,103	6,060	279

TABLE 21.—*Women in Medicine in the United States*

Year	Women Students	Percentage of All Students	Women Graduates	Percentage of All Graduates
1905	1,073	4.1	219	4.0
1910	907	4.0	116	2.6
1915	592	4.0	92	2.6
1920	818	5.8	122	4.0
1925	910	5.0	204	5.1
1926	935	5.0	212	5.4
1927	964	4.9	189	4.7
1928	929	4.5	207	4.9
1929	925	4.4	214	4.8
1930	935	4.4	204	4.5
1931	960	4.5	217	4.6
1932	955	4.3	208	4.2
1933	1,036	4.7	214	4.4
1934	1,090	4.5	211	4.2
1935	1,077	4.7	207	4.1
1936	1,133	5.0	246	4.7
1937	1,113	5.1	238	4.4
1938	1,161	5.4	237	4.6
1939	1,144	5.4	269	5.1
1940	1,145	5.4	253	5.0
1941	1,146	5.4	280	5.3
1942	1,164	5.3	279	5.4
1943	1,150	5.1	241	4.6
1944	1,176	5.0	239	4.7
1944 (Second session)	1,141	4.6	252	4.9
1945 (to June 30)	1,352	5.6	262	5.1
1946 (to May 31)	1,868	8.0	242	4.2

ment of women (2,103) was appreciably higher than in the preceding year, 1944-1945 (1,580). The enrolment of women in each of these academic years was higher than in any preceding year since 1935-1936. The number of women medical students last year was about 175 per cent of the enrolments of ten years ago. However, these increased enrolments have not yet been reflected in numbers of women graduates, which have not changed appreciably in the last decade.

Table 21 gives the numbers and percentages of women medical students and graduates in the United States since 1905. In the academic year just completed there were 8 per cent women students, the highest on record, and just double the percentage of about thirty years ago. The percentage of women graduates in the year reported has been exceeded many times in recent years.

V 13
1946

In fact, the percentage in 1945-1946 was the lowest since 1935. The increase in total graduates in 1945-1946 was due entirely to increased numbers of male graduates.

With the current limitations on men preparing for the study of medicine, we may expect still further increases in numbers of women admitted to medical schools. In the 1946 entering classes about 12 per cent will be women. Women should have opportunities to study medicine equal to those of men. This has been approximately true in the past, at least as evidenced by the fact that the ratio of women applicants to women accepted in medical schools has been about the same as the ratio for men. With further increases in women selected, care must be taken to avoid any reduction in the standards of admission and in academic performance in the medical schools.

LOAN FUNDS AND SCHOLARSHIPS

In recent years the need for loan and scholarship funds in medical schools has not been great because about 80 per cent of medical students were financed under the A. S. T. and Navy V-12 programs. With the cessation of these programs students were compelled to finance themselves, partly with the aid of loan and scholarship funds. This has been done so successfully that less than 3 per cent of the former military students left medical school on being discharged. It must be remembered that this surprisingly small number included those leaving not only for financial reasons but for other reasons as well, including scholastic.

It is probable that loan and scholarship funds will not be in as great demand for a few years as they were before the war. For a time there will be considerable numbers of veterans in our medical schools, most if not all of whom will be receiving tuition, expenses and maintenance under either Public Law 346 (the "G. I. Bill of Rights") or Public Law 16. The freshman class entering in 1946 will have about 60 per cent veterans.

Most medical schools maintain loan and scholarship funds for those needing and deserving assistance. In some institutions these sums have been accumulating during the war. The amount available and the policies in dispensing such funds vary considerably from school to school.

PART TIME, SPECIAL AND NONMEDICAL STUDENTS

Part time, special and nonmedical students are excluded in all of the foregoing tabulations and statistics. Special students include those carrying work in such fields as public health, physicians reviewing for specialty board examinations and students preparing to become physical therapy or clinical laboratory technicians. Curriculums in these and other fields may involve medical courses.

During the 1945-1946 session there were 204 part time or special students and 309 other nonmedical students (including graduate students) enrolled in some of the medical courses in forty-three medical and basic science schools in this country. These figures are appreciably larger than those of a year ago. Yet they are well below the prewar figures. In 1940-1941 there were 1,167 graduate students in our schools. The wartime policies of selective service, still in operation, decidedly limit the number of students who can pursue graduate work in science. The deficiency in medical school teachers and investigators resulting from these policies will damage medical education for many years.

GRADUATES WITH BACCALAUREATE DEGREES

At the present time only one medical school in the United States (Johns Hopkins) and two in Canada (Montreal and Laval) require the bachelor's degree for admission to the medical school. Tufts, although not requiring a degree, asks that the candidate for admission present four years of premedical work. Students at Vanderbilt must earn the bachelor's degree during the first year in medical school.

TABLE 22.—*Graduates with Baccalaureate Degrees, July 1, 1945 to May 31, 1946*

	Graduates	Degrees
University of **Arkansas**	67	43
University of **California**	73	73
College of Medical Evangelists	93	61
University of Southern California	63	38
Stanford University	..	..
University of **Colorado**	54	49
Yale University, **(Connecticut)**	59	49
Georgetown University, **(District of Columbia)**	81	58
George Washington University	82	33
Howard University	58	51
Emory University, **(Georgia)**	61	55
University of Georgia	68	37
Loyola University, **(Illinois)**	68	28
Northwestern University	155	154
University of Chicago, School of Medicine	58	50
University of Illinois	183	140
Indiana University	183	175
State University of **Iowa**	67	38
University of **Kansas**	75	62
University of Louisville, **(Kentucky)**	91	61
Louisiana State University	67	37
Tulane University of Louisiana	260	87
Johns Hopkins University, **(Maryland)**	76	70
University of Maryland	97	64
Boston University, **(Massachusetts)**	69	51
Harvard Medical School	141	94
Tufts College	103	101
University of **Michigan**	136	102
Wayne University	53	47
University of **Minnesota**	129	126
St. Louis University, **(Missouri)**	124	81
Washington University	93	48
Creighton University, **(Nebraska)**	59	23
University of Nebraska	75	45
Albany Medical College, **(New York)**	44	27
Long Island College of Medicine	101	80
University of Buffalo	..	..
Columbia University	113	95
Cornell University	80	73
New York Medical College	96	74
New York University	132	114
University of Rochester	65	49
Syracuse University	..	..
Duke University **(North Carolina)**	71	52
Bowman Gray School of Medicine	47	42
University of Cincinnati, **(Ohio)**	76	63
Western Reserve University	82	77
Ohio State University	72	65
University of **Oklahoma**	69	45
University of **Oregon**	63	68
Hahnemann Med. College, **(Pennsylvania)**	125	89
Jefferson Medical College	155	155
Temple University	125	53
University of Pennsylvania	133	90
Woman's Medical College	36	32
University of Pittsburgh	78	69
Medical College of **South Carolina**	42	30
University of **Tennessee**	99	49
Meharry Medical College	64	37
Vanderbilt University	47	47
Southwestern Medical College, **(Texas)**	48	24
Baylor University	88	43
University of Texas	88	61
University of **Utah**	38	35
University of **Vermont**	37	34
University of **Virginia**	65	55
Medical College of Virginia	80	76
University of **Wisconsin**	74	74
Marquette University	164	106
University of Alberta, **(Canada)**	20	20
University of Manitoba	56	19
Dalhousie University	..	..
Queen's University	41	12
University of Western Ontario	38	6
University of Toronto	131	31
McGill University	101	77
University of Montreal	56	56
Laval University	70	70
Totals	6,339	4,587

Despite these few bachelors' requirements by medical schools there were 4,587 of the 6,339 graduates of medical schools in this country and Canada who obtained the bachelor's degree by the time they received the M.D. degree, as shown in table 22. Some of these

bachelors' degrees were issued by the medical schools, but almost all of them were granted by the corresponding university rather than the medical school itself.

In the United States 4,296 (or 74 per cent) of the 5,826 medical graduates also held the bachelor's degree and in Canada 291 (or 59 per cent) of the 513 medical graduates also earned the additional degree. All the graduates of the following nine schools in the United States and Canada held both degrees: California, Minnesota, Oregon, Jefferson, Vanderbilt, Wisconsin, Alberta, Montreal and Laval. Some of the M.D. graduates of every medical school in both countries also held the bachelor's degree.

FEES

The eighty-seven medical schools in the United States and Canada have been arranged in six groups in table 23 according to tuition fees charged resident students for the session 1945-1946. The figures are based on the average tuition fee charged for the complete medical course and includes such minor charges as those for matriculation, breakage, diploma and graduation.

The upward trend in tuition fees of recent years is still continuing. The average tuition fee charged by medical schools in the past six years for an academic year has increased from $378 in 1940 to $433 in 1946.

Thirty-three schools in the United States and five in Canada make an additional charge for nonresidents. These sums vary considerably in amount. The lowest charge is at Toronto, where nonresidents in the freshman class pay $5 a year and others pay $10. Four schools in this country charge $50 or less annually. Two schools have nonresident fees of $350 or more: Oklahoma $350 and Louisiana $400.

TABLE 23.—*Fees in Medical and Basic Science Schools in the United States and Canada, 1945-1946*

	Number of Schools
Under $99	1
$100 to 199	6
200 to 299	18
300 to 399	10
400 to 499	16
500 or over	36
Total	87

APPROVED INTERNSHIPS AND RESIDENCIES FOR VETERAN AND CIVILIAN PHYSICIANS

Facilities for residency training in hospitals approved by the Council on Medical Education and Hospitals have increased by 70 per cent since 1941. At the present time the number of residencies in specialties total 8,930 as compared with 5,256 at the beginning of the war. The distribution of these services is clearly illustrated in table 24, which includes all approved internships and residencies in the United States except the educational programs of the Army and Navy and those recently organized by the Veterans Administration. This table, which is arranged by states and individual specialties, gives comparative data for 1945 and also an estimate of postwar residency requirements as published in the previous Educational Number of THE JOURNAL.[2]

By comparing the estimated need with the number of residencies now available it would seem that existing facilities in anesthesiology, neurologic surgery, pathology, psychiatry and neurology and radiology might be sufficient to meet the demand for residency training in these fields. When it is taken into consideration, however, that many of the present positions are occupied by residents who will remain for periods of two or three years to complete the requirements for certification it is apparent that further expansion will still be necessary. There is a continued shortage of residencies in other divisions, particularly in general surgery, obstetrics-gynecology, internal medicine, ophthalmology-otolaryngology and dermatology. Surgery and obstetrics-gynecology can provide approximately 65 per cent of the estimated need in each field, internal medicine, ophthalmology-otolaryngology and dermatology 75 per cent. In orthopedic surgery, urology and pediatrics about 90 per cent of the estimated requirement can be fulfilled, in plastic surgery about 80 per cent. A notable expansion has occurred in the field of physical medicine, in which a total of thirty-seven residencies is now available in nineteen institutions. Residencies in allergy have recently been organized, and provisions are also being made for the separate listing of residencies in gastroenterology and in proctology.

In the mixed residency group there are only 251 training programs listed in comparison with the estimated need of 859. In this connection it should be noted, however, that all hospitals approved for intern training are likewise accredited for mixed residencies. A considerable part of the demand for general training can therefore be absorbed by the hospitals in the intern group. Mixed residencies represent general hospital assignments similar to second year internships. They serve mainly as additional preparation for general practice and are not intended as a means of fulfilling requirements for specialty certification. In relation to the postwar requirement of 11,523 residencies in all fields the present total of 8,930 represents 77 per cent, or approximately three fourths of the estimated needs. It is quite possible, however, that these needs have been considerably underestimated, especially in view of the unexpectedly rapid demobilization of medical officers. The Council, with the cooperation of the specialty boards, is bending every effort to aid the establishment of additional educational programs of high quality so that every qualified veteran who desires to continue his residency training may have an opportunity to obtain an acceptable hospital appointment. The expansion which has already taken place as well as the number of applications recently submitted for Council consideration is convincing evidence of the continued interest and desire of hospitals to cooperate to the fullest extent in the training of physician veterans.

Large numbers of applications for residency approval have been submitted by hospitals in recent months. To make these facilities available to physician veterans without undue delay, the Council has instituted a plan for the temporary approval of such residencies as give reasonable assurance that training can be maintained at a satisfactory level. This plan, which has been developed in collaboration with individual specialty boards, has been described in previous issues of THE

2. J. A. M. A. **129**: 56 (Sept. 1) 1945.

JOURNAL.[3] The procedure has proved highly successful not only in expediting the approval of individual applications but also in stimulating the development of additional residency programs in many hospitals. Already 316 residency programs have been granted temporary approval; these can accommodate a total of 468 resident physicians. It should also be noted that medical schools are taking an active part in the training of resident physicians and in the development of suitable courses in the basic medical sciences. The role of the dean's committees and the function of medical schools in relation to the residency programs of Veterans Administration hospitals have been described in THE JOURNAL.[4]

A new and complete list of Approved Residencies and Fellowships for Veteran and Civilian Physicians is published in this issue, pages 1322-1354. The educational services included in this list have been investigated by the Council and are considered in position to furnish acceptable residency training in accordance with the standards adopted by the American Medical Association. In practically all fields these services have been reviewed in collaboration with the respective specialty boards. Several boards have indicated the amount of credit extended to individual residencies, as shown in accompanying footnotes. As other services are reviewed, similar designations will be included in subsequent issues. The total number of hospitals approved by the Council for residency training is 887 exclusive of eight army and twenty-five naval hospitals.

A newly prepared list of Approved Internships appears on pages 1311-1321. This contains the names of 8 army hospitals, 34 naval hospitals and 756 civilian institutions. The latter can accommodate 8,584 interns as compared with the annual total of approximately 5,500 medical graduates. While this would indicate an excess of approximately 3,000 places, it should be noted that under normal peacetime conditions nearly 2,300 interns remain for a second year of training or hold original appointments of more than twelve months.

The 9-9-9 program having been discontinued, the approved internship hospitals are readjusting their services to the usual peacetime status. The July to July schedule is being reestablished as well as a uniform method of appointment as described in THE JOURNAL.[5] The hospitals are rebuilding their intern staff to the regular prequota level, although in some instances the number of interns is being reduced to provide additional

TABLE 24.—*Approved Internships, Assistant Residencies and Residencies—1946*

	Number of Internships	Number of Assistant Residencies and Residencies *																
		Mixed	Anes.	Derm. Syph.	Int. Med.†	Neur. Surg.	Ob. Gyn.	Oph. Otol.	Orth. Surg.	Path.	Ped.	Phys. Med.	Plas Surg.	Neur. Psy.	Rad.	Surg.‡	Uro.	Totals
Alabama	55	12	2	2	7	..	5	..	2	3	4	..	..	..	3	9	2	51
Arizona	13	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1	.	4
Arkansas	27	2	..	..	2	..	3	..	..	2	..	..	..	..	..	2	..	11
California	555	34	10	6	107	9	34	26	25	21	40	4	..	35	27	87	15	480
Colorado	67	7	..	1	18	..	4	4	6	11	8	..	..	14	6	6	1	86
Connecticut	174	6	16	..	32	2	14	3	6	11	13	..	..	29	9	25	2	168
Delaware	29	..	..	..	4	..	..	..	1	1	1	..	..	4	1	4	..	16
Dist. of Columbia	138	..	1	2	41	..	23	9	6	13	18	..	..	17	7	36	2	175
Florida	60	1	..	..	6	2	..	..	1	..	..	..	..	1	9	2	2	22
Georgia	118	..	3	..	21	..	13	6	3	6	11	..	..	7	29	4	103
Idaho	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Illinois	669	14	23	9	105	12	82	71	31	55	51	4	..	57	39	93	15	661
Indiana	162	8	7	1	20	..	7	8	8	12	3	..	..	11	8	15	3	111
Iowa	63	2	9	4	13	..	11	17	10	3	7	..	..	11	9	26	6	128
Kansas	45	..	2	2	6	1	5	1	2	3	1	3	8	8	2	6	1	51
Kentucky	58	2	3	10	12	2	5	2	4	2	5	..	..	4	..	23	..	74
Louisiana	245	6	7	..	41	..	22	38	21	11	13	..	3	14	10	44	10	240
Maine	22	..	..	..	3	..	..	..	..	1	..	..	..	..	..	2	..	6
Maryland	276	3	..	3	77	3	50	20	6	14	16	..	..	47	10	80	4	333
Massachusetts	415	26	32	5	103	9	24	23	19	25	15	2	..	82	24	97	13	497
Michigan	365	20	4	11	140	2	45	31	13	19	31	..	1	44	25	131	17	534
Minnesota	138	12	14	15	149	9	24	28	22	15	20	7	4	15	19	161	18	532
Mississippi	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	1	..	4
Missouri	330	2	..	1	78	2	30	30	10	16	30	..	..	38	21	77	9	344
Montana	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nebraska	50	3	..	..	1	1	3	3	2	2	3	..	..	13	3	4	..	38
Nevada	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
New Hampshire	8	4	..	..	..	..	..	..	..	3	..	..	..	1	1	..	..	9
New Jersey	399	..	8	..	31	..	20	10	13	5	5	..	2	22	2	18	9	145
New Mexico	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
New York	1,670	23	68	31	365	33	146	155	84	94	120	6	6	233	87	328	54	1,833
North Carolina	121	9	..	3	24	..	14	10	8	20	15	..	..	14	12	38	10	177
North Dakota	2	3	..	..	1	..	..	..	..	..	1	..	..	..	1	..	1	6
Ohio	452	9	11	13	170	9	50	22	25	30	46	1	..	33	35	154	13	621
Oklahoma	46	..	3	..	3	11	4	2	9	3	2	..	11	..	1	4	2	55
Oregon	73	..	3	5	7	..	4	6	6	7	3	..	..	2	5	9	3	60
Pennsylvania	771	2	16	12	78	4	44	35	26	46	41	1	2	68	47	89	12	523
Rhode Island	41	..	1	..	7	..	2	..	2	2	2	..	..	14	1	6	..	37
South Carolina	38	..	..	..	4	..	4	..	5	..	4	..	..	..	2	6	3	28
South Dakota	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tennessee	147	..	1	..	20	6	19	8	12	8	12	..	..	..	10	28	..	124
Texas	193	7	4	3	35	..	21	5	6	12	21	..	..	18	11	43	2	188
Utah	39	..	..	..	7	..	2	..	..	1	3	..	..	..	1	5	..	19
Vermont	8	..	3	..	2	..	..	..	..	2	..	..	..	2	2	3	..	14
Virginia	121	16	..	7	28	10	12	17	13	3	9	1	..	11	10	39	8	184
Washington	116	2	..	..	9	..	5	2	9	3	1	..	..	11	1	12	..	55
West Virginia	42	10	..	..	6	..	1	..	2	2	..	..	..	..	..	14	..	35
Wisconsin	162	4	9	..	33	..	11	8	9	7	11	2	..	13	7	28	6	148
Wyoming	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals (1946)	8,526¶	251	260	146	1,819	127	763	600	427	494	584	31	37	885	467	1,793	246	8,930
Estimated total postwar residencies required		859	199	190	2,391	74	1,119	828	444	437	642	..	45	748	436	2,756	264	11,523
Residencies in 1945		225	198	122	1,636	89	642	579	332	427	496	12	8	742	364	1,543	210	7,625

* Includes fellowships, and traumatic surgery. † Includes allergy, cardiology, communicable diseases and tuberculosis. ‡ Includes malignant diseases, thoracic surgery ¶ Plus 64 internships in the Canal Zone, Hawaii and Puerto Rico.

3. J. A. M. A. **130:** 575 (March 2), 1088 (April 20) 1946.
4. J. A. M. A. **129:** 1100 (Dec. 15) 1945, **130:** 941 (April 6) 1946.
5. J. A. M. A. **130:** 1090 (April 20) 1946.

opportunities for resident physicians. The discontinuance of deferments beyond the intern level has also made available a large number of places for physician veterans who desire residency or assistant residency appointments. The establishment of eighteen and twenty-four months services is under consideration in some hospitals; yet it is anticipated that most services will continue as one year assignments followed by assistant residencies and residencies for those who desire additional hospital training either of a general or of a special character.

Both the intern and residency lists will be given wide distribution to medical schools, state boards of medical examiners, specialty boards and other agencies. They will also be available to medical officers and other physicians on request.

The applicability of the educational provisions of the "G. I. Bill of Rights" to hospitals offering approved residency programs and to physician veterans seeking such training has been described in detail in THE JOURNAL.[6] Reprints of this statement are available from the Council on Medical Education and Hospitals.

POSTGRADUATE CONTINUATION COURSES FOR VETERAN AND CIVILIAN PHYSICIANS

Since 1937 the Council on Medical Education and Hospitals has published periodically in THE JOURNAL lists of continuation courses of a review and refresher nature offered by educational institutions throughout the country to graduate physicians. Currently two general forms of continuation study are offered. The first consists of courses offered in metropolitan centers with facilities for systematic instruction as provided in medical and other educational institutions where abundant clinical material and medical laboratories are available. The second form of postgraduate study now being offered is by lectures, demonstrations, clinics, ward rounds, symposiums and conferences. These programs are briefer and are made available to the physician in close proximity to his home. On Dec. 8, 1945 THE JOURNAL contained a list of such opportunities offered in both categories during the period Jan. 1 to July 16, 1946. This listing was about 30 per cent longer than that for the preceding six months period as a result of increased facilities, which have been developed primarily for returning medical officers. More important than mere numbers of courses was the fact that more of the courses were of longer duration, more were offered by universities and medical schools and there was a wider geographic distribution. Such courses were developed so rapidly and in such numbers that supplementary listings were published in the interim between regular publications.[7]

The response of medical schools, hospitals, medical societies and other educational institutions throughout the country to the great demand for these educational opportunities has been most gratifying. On every hand there is a maximal attempt to provide the needed facilities. The listing of opportunities to be offered during the period July 1, 1946 to Jan. 15, 1947 appeared in the June 29, 1946 issue of THE JOURNAL. The number of courses offered continues at the expanded level of the past six months period. Many new courses were organized primarily to meet the needs of veterans, although most are also open to other physicians. Seventy-nine institutions and organizations are represented in this listing, offering 558 courses, some of which are given more than once in the period covered. Forty-seven medical schools give 491 courses, practically 90 per cent of the total. Many of these are full time and extend for relatively long periods. This invaluable contribution by medical schools was made possible in many instances by the actions of the Army, Navy and Selective Service System, which permitted medical school deceleration and thus freed facilities and faculty members for utilization in this manner. The usefulness of this listing is apparent from the demand for reprints, in addition to the wide distribution effected by the regular publication in THE JOURNAL. Requests for reprints are received at the rate of about one hundred and fifty a week, which is several times the number requested before the war. Institutions and individuals participating in these programs are rendering a great service to the returning medical officers. THE JOURNAL and the Council are indebted to them for making these listings possible.

These continuation or review courses do not ordinarily provide credit of any kind, as the courses are not designed to prepare men for board certification. Some opportunities are offered for review work in preparation for examinations in clinical specialties as given by the specialty boards.

The following statement pertaining to the benefits available to veteran medical officers under the G. I. Bill of Rights for review or refresher courses was compiled by a subcommittee on veterans' affairs of the Committee on Postwar Medical Service and has been approved by the Central Office of the Veterans Administration.

Short Intensive Postgraduate or Training Courses of Less than Thirty Weeks.—Institutions providing review and refresher courses of less than thirty weeks, having regularly established fees, must be approved by the appropriate state agency and must arrange for tuition payments with the regional offices of the Veterans Administration. The veteran must establish his eligibility for this work. The fee can be charged, provided the cost is not in excess of the rate of $500 for a full time course for an ordinary school year. If the customary charges are in excess of the rate of $500 for an ordinary school year the Veterans Administration must find that the agreed cost of such courses is reasonable and fair. However, for review and refresher courses there will be charged against the veteran's time period of eligibility the proportion of an ordinary school year which the cost of the course bears to $500. For example, if an eligible veteran elects a two month course for which $250 is paid, there will be charged against the veteran's period of eligibility for training, not two months, but a half of an ordinary school year, since $250 is half of $500.

By taking such a review or refresher course the veteran does not forfeit the right for further education within the limits of the period of eligibility for instruction for which he has been certified.

The complete statement of the subcommittee compiled for the information of approved residency hospitals and physician veterans has been published in THE JOURNAL.[8]

In the following paragraphs mention is made of some of the recent and noteworthy developments in postgraduate education. An analysis of the courses offered during the period July 1, 1945 to July 1, 1946 is also presented.

6. J. A. M. A. **130**: 216-218 (Jan. 26) 1946.
7. J. A. M. A. **130**: 602 (March 2) and 816 (March 21) 1946.

RECENT DEVELOPMENTS

Thirty-five medical schools have indicated that deceleration of the undergraduate curriculum has made it possible to employ the facilities of the schools for increased educational opportunities for physicians. Opportunities developed have been three months or more full time courses in many of these institutions. Training courses in the basic sciences as well as in clinical subjects are being offered.

The New York Post-Graduate Medical School announced the attendance of 1,220 medical practitioners from forty-four states, the District of Columbia, three territories and nineteen foreign countries during the school year July 1, 1945 to June 30, 1946. This enrolment has been exceeded only once in the school's history, when in 1919-1920 the attendance totaled 1,399 doctors. That record would have been broken this year had not the school been compelled to turn away more than 300 applicants because of overcrowded facilities and the increased number of clinical courses for which enrolment is limited by the nature of the work done. Of the 1,220 practitioners enrolled, 578 were discharged medical officers who were given preference in all classes. These classes were chiefly in dermatology, pediatrics, gynecology, ophthalmology and surgery. Because many doctors enrolled for more than one course, there were 1,896 registrations, of which 885 were in the department of medicine. New York State doctors led in attendance, with a total enrolment of 410. A large increase in the number of practitioners from many states was reported. California, Connecticut, Maryland, New Jersey, New York, Texas, Vermont and Florida registration figures were almost doubled in all instances during 1945-1946 as compared with 1944-1945. Foreign enrolment during the past year numbered 75 doctors as compared with 82 during 1944-1945. This decrease resulted from the fact that the Canadian enrolment, always high at this postgraduate school, dropped because of an increased number of postgraduate training courses instituted in Canada during the past year. Advance enrolments for the 1946-1947 school year indicate that the school's facilities will be strained beyond capacity. The registrar's office reports that quotas for courses in dermatology and syphilology have been filled for the next two years with only one out of every five applicants being admitted. New York Post-Graduate Medical School and Hospital was established in 1882 as the first institution in the United States devoted solely to postgraduate training. Since 1931 the institution has been affiliated with Columbia University.

The Connecticut State Medical Society will conduct a clinical congress in September with a three day session at Yale University School of Medicine.

Physicians are invited to apply to the Illinois Department of Public Health for training in various schools of public health leading to the degree Master of Public Health. Funds are available to provide for the payment of tuition and for providing the physician with a monthly stipend of between $100 and $200. The trainee must agree to engage in public health, not necessarily in the state of Illinois, for a period of two years.

The University of Illinois College of Medicine plans to continue its three months' general refresher course and is soliciting applications for the course from medical officers and physicians in civil life. The Kellogg Foundation, which is a contributing agency for this course, desires that an effort be made to give some opportunity for practicing physicians to get some manner of training. The foundation supports a number of programs of this kind. The university also lists opportunities available for men seeking training in allergy. This effort has been supported by gifts from interested people.

At the Institute for Psychoanalysis in Chicago during the fall, winter and spring quarters case demonstrations in the fundamentals of psychodynamics, psychopathology and psychosomatic medicine will be offered. Some of these demonstrations will be presented at the institute and others at the Cook County Psychopathic Hospital.

The Kentucky State Medical Association has prepared plans for a variety of opportunities for study available to members of the Association.

Johns Hopkins University School of Hygiene and Public Health is accepting applications for an eight months course in public health to commence about October 1 with a maximum attendance of eighty.

In Massachusetts teams of instructors under the sponsorship of the state medical society will go to various zones in the state, where they will remain for two days at a time. It is planned to make such visitations at least three times during the year. This program is designed to aid the general practitioner.

The University of Minnesota Medical School Department of Postgraduate Education is featuring a course covering the basic sciences and their clinical application, which will extend from September 1 to June 30.

The Medical Society of the State of New York is continuing its series of postgraduate lectures and teaching days throughout the state.

In addition to intensive courses in nutrition and metabolism, and gastroenterology, the University of Cincinnati School of Medicine will conduct courses in the departments of medicine and pediatrics. These are not formal courses but are built around the idea of an advanced clerkship of three to four months.

The Jewish Hospital and Mount Sinai Hospital of Philadelphia have refresher courses open to all physicians, covering a wide variety of subjects, to be held daily except Saturday.

The University of Wisconsin will continue to offer its twelve week refresher courses for general practitioners.

The Commonwealth Fund is offering postgraduate fellowship aid to medical officers who have seen service for six months or longer since 1940 and who plan to take up residence and to practice in a community having a population of 25,000 or less situated in Mississippi, Oklahoma or Tennessee.

The American Academy of Ophthalmology and Otolaryngology is conducting a home study course in the fundamental subjects concerned in these specialties. The course will begin in September and will continue for nine months. The courses are designed for prospective members of the academy who wish to review for the specialty board examinations.

The American College of Physicians will offer courses of from five days to two weeks at various times from September 2 to December 7 in nine subjects in thirteen cities in the United States and in Montreal. Plans are also being developed for courses to be given in the spring of 1947. These courses are available to nonmembers of the college as well as to members. The registration in a few instances is restricted to fifteen or less.

Postgraduate courses and preceptorships for radiologists are offered at various centers throughout the country by the American College of Radiology.

The excellent opportunities outlined are mentioned to present the variability of the courses being offered throughout the country. THE JOURNAL for June 29, 1946 presents courses to be offered in the current six months in detail. Such institutions as Tulane, Harvard, Tufts, New York Eye and Ear Infirmary, New York Medical College, the New York Polyclinic and the University of Pennsylvania are continuing to offer organized courses.

ANALYSIS OF COURSES OFFERED IN 1945-1946

In presenting this analysis of postgraduate courses which have been offered during the annual period July 1, 1945 to June 30, 1946 the statistical summaries are divided into three groups: courses in which instruction was offered to physicians in or near their home communities, courses providing ample facilities for clinical instruction and, lastly, a group including clinical conferences, graduate assemblies, study courses and so forth.

Short Review Courses.—Fourteen states and the District of Columbia provided opportunities for physicians to continue professional study in or near their home communities. These fourteen states included California, Colorado, Illinois, Massachusetts, Michigan, Minnesota, New York, Ohio, Oregon, Pennsylvania, South Carolina, Texas, Virginia and Wisconsin. There was a total of 153 courses given. Illinois provided 27, New York 23, Michigan 20 and Pennsylvania 17. Other states offered fewer than 15. The subjects of these 153 courses were as follows:

Allergy	Neurosurgery
Anatomy	Nutrition
Anesthesiology	Obstetrics and gynecology
Arthritis	Ophthalmology
Bacteriology	Orthopedic surgery
Basic sciences	Otolaryngology
Biochemistry	Otology
Cardiovascular disease	Otorhinolaryngology
Chemistry	Pathology
Chest diseases	Pediatrics
Dermatology and syphilology	Pharmacology
Diabetes	Physical medicine
Electrocardiography	Physiologic chemistry
Electroencephalography	Physiology
Endocrinology	Poliomyelitis
Endoscopy	Proctology
Fractures	Public health
Gastroenterology	Radiology
Hematology	Surgery, general
Industrial health	Therapy
Legal medicine	Urology
Medicine, general	Venereal disease
Neurology and psychiatry	

Agencies which were active participants in providing these opportunities, either independently or jointly, included state or local medical societies and health departments in Michigan, Minnesota and Ohio and the medical schools of California, Colorado, Illinois, Massachusetts, Michigan, Minnesota, New York, Ohio, Oregon, Pennsylvania, South Carolina and Texas. Other agencies included the graduate schools of Harvard and Pennsylvania, the Institute for Psychoanalysis in Chicago, American Orthopsychiatric Association, American College of Allergists, American College of Physicians, Philadelphia Psychoanalytic Institute, Dallas Southern Clinical Society, Virginia Society of Ophthalmology and Otolaryngology, the Wisconsin Anti-Tuberculosis Association and the Horace H. and Mary A. Rackham Fund.

The courses varied in length from one session of one hour to five days full time, consisting of organized courses, daily set clinics on patients in the wards and evening lectures at hospitals with emphasis placed on recent developments. The type of instruction was didactic and clinical or both. The instructors were chosen from physicians practicing in the state in which the courses were offered as well as from out of state men. Medical school faculties participated in 55 courses. Fees ranged from $1 to $150, while for one course $300 tuition was charged. A few courses were given without charge to veteran medical officers.

These offerings were held in every month during the period July 1, 1945 to June 30, 1946, the majority being given in January and October, while in 22 instances they were arranged at the convenience of the applicant.

The attendance reported for 128 courses was 4,140, while 26 did not indicate enrolment figures. In the previous year (1944-1945) because of transportation and other difficulties there were only eight such short courses given, with an attendance of 2,365.

The value of this type of instruction to the busy practitioner is becoming more popular since he can obtain information regarding newer technics in medical practice without the necessity of prolonged absence from his practice.

Courses of Less than a Year.—In centers where ample clinical facilities are available, 1,056 graduate courses of less than one year's duration were offered in twenty-seven states and the District of Columbia. These states and the number of courses which were given in each state during the period July 1, 1945 to June 30, 1946 are as follows:

Alabama	5	Nebraska	15
California	22	New York	412
District of Columbia	33	North Carolina	40
Georgia	7	Ohio	3
Illinois	255	Oklahoma	5
Iowa	3	Oregon	14
Kansas	7	Pennsylvania	17
Kentucky	5	Rhode Island	1
Louisiana	21	Tennessee	8
Maryland	9	Texas	24
Massachusetts	47	Vermont	5
Michigan	50	Virginia	7
Minnesota	20	Wisconsin	13
Mississippi	1		
Missouri	7	Totals	1,056

These courses, consisting of short review courses of five or more days to intensive courses extending over one year, and in one instance to two years and another three years, were offered in both the basic sciences and clinical subjects. Many of these opportunities were developed primarily for veteran medical officers but were also attended by civilian physicians. Forty-eight subjects were covered. While the majority of the courses were in various subjects as the demand seemed apparent, specific courses in general medicine were offered in 186 instances, radiology in 116, surgery in 105, neurology and psychiatry in 64, ophthalmology in 62, obstetrics and gynecology in 62, pediatrics and endoscopy in 42, cardiovascular disease 38, pathology 37, allergy 34, dermatology and syphilology 31 and electrocardiography 30. Fewer than five courses were given in 19 subjects.

One hundred and three agencies or combination of agencies participated in the planning of programs. Four postgraduate schools of medicine played a prominent part in offering courses of this nature. Of the medical

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schools, forty-four have given courses for practicing physicians during the year. Sixteen hospitals sponsored courses, as did six state medical societies, six state boards of health, three local societies and one county society. Other agencies included fifteen special societies, the American College of Physicians, the United States Public Health Service, the Catholic University of America and four institutes. Contributing agencies included the W. K. Kellogg Foundation, Horace H. and Mary A. Rackham Fund, Commonwealth Fund, Lillia Babbit Hyde Foundation, the Veterans Administration, Children's Bureau, the United States Public Health Service and the commonwealth of Virginia.

The length of these courses varied from five days to one month for 508 courses. There were offered 407 courses ranging in length from one to four months and 53 from five to twelve months. There were 6 one year courses and one each given for two and for three years, while the remainder specified the length of the course in hours, sessions, semesters or quarters.

The description of these intensive courses gave evidence that the type of instruction was both clinical and didactic. For 625 courses instruction was both didactic and clinical. In presenting postgraduate courses, hospital facilities were used for 631 courses, medical schools for 587 and clinics for 476. In many instances two or all three of these sources were used in presenting an individual course. Hotel and other facilities were used for 25 courses. One course was a home study. The faculties of the medical schools served as instructors in 694 courses. Additional instructors were specialists in their fields chosen mainly (in 447 instances) from physicians residing within the state in which the course was given but including as well physicians from outside the state.

Courses were offered during every month last year and in 153 instances they were arranged to suit the convenience of physician-students. There were 96 courses available for specialists only. Fees varied considerably, ranging from $2 to $1,000. Tuition was arranged for in many instances under the G. I. Bill of Rights. For twelve courses no fee was exacted from veteran medical officers.

The attendance reported for 1,029 of the 1,056 courses given last year was 19,846. In 1945 the attendance for 364 such courses was 8,888.

Fourteen courses were reported for which the length of the course was not stated and therefore could not be classified in one or other of the categories described. For these courses which covered seven subjects the attendance totaled 145.

Canceled courses numbered 149. The reasons given for cancellation included (*a*) enrolment which did not reach the minimum required and (*b*) unexpected changes in the date of discharge from the armed services.

Clinical Conferences and Assemblies.—Fifty-two clinical conferences, symposiums or graduate assemblies of less than five days were held in eighteen states. The specialties covered were allergy, chest diseases, medicolegal problems, medicine, neurology and psychiatry, obstetrics and gynecology, pathology, pediatrics and surgery. Twenty-one agencies participated in the instruction. These study groups were held in centers with facilities for clinical and practical work and for scientific exhibits. Instruction was both didactic and clinical. The facilities of hospitals, clinics and medical schools were used. The instructors included physicians residing in the state where the assembly was held, physicians from other states and members of the professorial faculties of medical schools. Registration fees ranged from $1 to $10, while no fee was charged in 34 instances. The total recorded attendance was 21,824. The sectional meetings of the American College of Surgeons, which were held in ten cities with an attendance of 10,000, are included in this tabulation.

Summary.—For all three types of training offered during 1945-1946 the attendance reported was 45,955. In 1944-1945 the attendance totaled 18,206. These figures exclude physicians who were enrolled in courses leading to higher degrees and those serving internships and residencies and medical officers attending courses arranged by military authorities.

The institutions of the country are to be commended for the expansion of their facilities which has made it possible for these 45,955 physicians to obtain graduate training in a single year.

WARTIME GRADUATE MEDICAL MEETINGS

Under the auspices of a committee representing the American Medical Association, the American College of Physicians and the American College of Surgeons a series of wartime graduate medical meetings have been held for the past several years emphasizing programs available to physicians in military service. With the separation of most physicians from the armed forces these meetings have been discontinued. These meetings served a useful purpose during the war period, enabling physicians to maintain contact with civilian medicine.

EXAMINING BOARDS IN THE MEDICAL SPECIALTIES

The American Board of Ophthalmology, the first of the examining boards in the specialties, was incorporated in 1917. Four additional boards were organized by 1933 (Otolaryngology in 1924, Obstetrics and Gynecology in 1930, Dermatology and Syphilology in 1932 and Pediatrics in 1933).

In 1933 the House of Delegates of the American Medical Association adopted a resolution authorizing the Council on Medical Education and Hospitals "to express its approval of such special examining boards as conform to the standards of administration formulated by the Council" and providing for the employment of "the machinery of the American Medical Association, including the publication of its Directory, in furthering the work of such examining boards as may be accredited by the Council." These standards were formulated and ratified by the House of Delegates in 1934. Other boards were later organized and since 1940 fifteen boards have been in operation. All these boards are fully approved by the Council.

Three boards certify candidates in subspecialties. The American Board of Internal Medicine certifies in allergy, cardiovascular disease, gastroenterology and tuberculosis. Similarly the American Board of Surgery certifies specialists in proctology. The American Board of Pediatrics has recently developed procedures for

certifying pediatricians in allergy. Regular board certification is a prerequisite for certification in the subspecialty. This function of these boards in internal medicine, surgery and pediatrics certifying specialists in the subspecialties is also approved by the Council.

There has been some misunderstanding regarding the status of the so-called subspecialties of proctology (in surgery), cardiovascular diseases, gastroenterology, tuberculosis (in medicine) and allergy (in medicine and pediatrics). These subspecialties are fully recognized by the Council on Medical Education and Hospitals of the American Medical Association. As such they are appropriate fields in which to organize residency training when the facilities warrant. Approved training programs will be listed under these headings in the Council's official list of approved residencies whenever the subspecialty board so desires.

The "Essentials of Approved Examining Boards in the Medical Specialties" as prepared by the Council outlines the type of organization and the responsibilities of such boards as well as the minimum qualifications deemed necessary for certification as a specialist. Such qualifications include graduation from an approved medical school, completion of an internship in a hospital approved by the Council and a period of specialized training in a selected specialty. Three years of special training and a further period of two years devoted to specialty study and/or practice are considered by the Council to be the minimal training required before specialty practice. Some boards require more than this amount of training and education. Each board publishes a booklet containing information regarding its organization, personnel, purposes and requirements for certification. A statement of these requirements for each board was published in the Educational Number of THE JOURNAL in 1942.[8] Only a few minor changes have been made by some of the boards since these regulations were published in 1942.

The majority of the boards grant some credit for military service. The policies adopted by the boards vary. One board grants an indefinite amount of credit, to be determined by an evaluation of the experience of individual applicants. The board in surgery grants full credit for work done in the surgical division of a regularly constituted army or navy hospital. Most boards limit the credit allowed to one year of training and/or one year of experience. The special provisions for military credit made by each board were published in the 1943 Educational Number of THE JOURNAL.[9]

In 1933-1934 the Advisory Board for Medical Specialties was organized with representation from each of the approved boards to "act in an advisory capacity to such organizations as may seek its advice concerning the coordination of the education and certification of medical specialists." The Council on Medical Education and Hospitals and the Advisory Board for Medical Specialties work in close collaboration through joint meetings and frequent conferences.

The 9-9-9 wartime graduate program curtailed the duration of hospital training of physicians desiring specialty certification. The various boards are taking this into consideration and will probably allow credit for the actual time spent by the candidate in house officer training in approved hospitals for nine month periods.

8. J. A. M. A. **119**: 1345 (Aug. 15) 1942.
9. J. A. M. A. **122**: 1085 (Aug. 14) 1943.

The Council on Medical Education and Hospitals cooperates with the various specialty boards in the approval of residencies and fellowships acceptable for certification. The Council inspects and evaluates new residencies in most instances; it approves residency programs jointly with the specialty boards. This program has been established so that approved services may be equally acceptable to the Council and to the respective specialty boards.

Because of the large number of applications for approval of residency training programs submitted by hospitals developing these programs in response to the increased demand for training by returning medical officers, the Council on Medical Education and Hospitals of the American Medical Association has approved a plan [3] for the temporary approval of residencies. This plan was developed in collaboration with the Advisory Board for Medical Specialties through its executive committee. Virtually all of the

TABLE 25.—*Specialty Board Credit for Preceptorship Training*

		Preceptors Limitations			
	Credit Awarded	Any Certified Board Member	Other Than Certified Board Member	List of Preceptors Maintained	Maximum Training Credit
Anesthesiology	Yes	No[1]	Yes (rarely)[1]	No	2 years
Dermatology and syphilology	Yes	No[1]	No	Yes	2 years
Internal medicine	No[2]	...	...	...	.....
Neurologic surgery	Yes	No[1]	No	No	No limit set
Obstetrics and gynecology	Yes	Yes	Yes[1]	No	Average 6 mos.
Ophthalmology	Yes	No[1]	Yes[1]	No	No limit set
Orthopedic surgery	Yes	Yes	No	No	3 years
Otolaryngology	Yes	Yes	Yes[1]	No	5 years
Pathology	No	...	...	...	.....
Pediatrics	No	...	...	...	.....
Plastic surgery	Yes	Yes	No	No	Full credit
Psychiatry and neurology	No	...	...	...	.....
Radiology	No	...	...	...	.....
Surgery	Yes	Yes[3]	Yes[1]	No	5 years
Urology	Yes	No[1]	No	No	3 years

1. Facilities and teacher qualifications must be approved by board.
2. All preceptorships now recognized by the board to be discontinued July 1, 1947. No new preceptors to be appointed.
3. Institution must be approved for graduate training.

American boards have already indicated an approval of the proposal. In seeking approval by the Council on Medical Education and Hospitals, those hospitals which organize new residencies should initially make no distinction between regular versus temporary approval. Applications should be transmitted to the Council in the regular manner. In the immediate future most applications will be considered at once for temporary approval. The Council's staff will proceed with regular inspections as rapidly as possible, so that transfer of acceptable hospital residencies from temporary approval to regular approval will take place as rapidly as possible if the inspection report seems to warrant such transfer in the opinion of the representatives of the Council and of the American board concerned.

Service with a qualified preceptor is recognized by some of the specialty boards as a substitute for special training. The policies of the boards toward the acceptance of such training are briefly outlined in table 25. The exact time credit varies and in all

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instances is decided on an individual basis, depending on the amount of clinical responsibility and activity. The individual facilities and teacher qualifications of the preceptor must be approved by the respective board. This type of training is not accepted by four boards. The American Board of Internal Medicine has recently ruled that all preceptorships will be discontinued as of July 1, 1947 and no new preceptors will be appointed. Only five of the boards will give consideration to preceptor training carried out under a qualified specialist who is not himself certified by the appropriate board. One board maintains a list of preceptors.

Table 26 gives the annual number of specialists certified by all boards for the past six years. The largest number (2,172) obtained certificates in the year ended March 1943. In the two succeeding years there were progressive decreases primarily because of the war. Of all those physicians now certified, 40 per cent received their specialty credentials in the past six years. It is anticipated that the numbers of those physicians seeking certification will greatly increase in the future judging by the numbers of inquiries received.

A list of the specialty boards and their officers and the number of certificates awarded prior to March 1, 1945 and the number certified until March 1, 1946 respectively appear in table 27. On March 1, 1945 there were 24,752 physicians certified by the fifteen boards, and in the following year 1,356 were certified. Up to March 1, 1946 a total of 26,108 certificates had been awarded.

TABLE 26.—*Annual Specialty Board Certifications Since 1940*

Year (Ended March)	Number of Boards in Existence	Number Certified That Year	Accumulated Totals
1940	14	.....	15,833
1941	15	2,085	17,938
1942	15	1,756	19,694
1943	15	2,172	21,866
1944	15	1,578	23,444
1945	15	1,308	24,752
1946	15	1,356	26,108

Included in these figures are 809 who had been certified in the subspecialties mentioned, namely allergy 81, cardiovascular disease 338, gastroenterology 171, proctology 72 and tuberculosis 147.

In the specialties of internal medicine and surgery, 3,906 and 2,620 respectively have received the certificate of these boards. However, the greatest number in any one specialty certified was in otolaryngology. In this specialty 3,886 have received the board's certificate since its organization in 1927. The oldest board in existence, ophthalmology (organized in 1917), has to date certified 2,490. The smallest numbers are certified in plastic surgery (163) and neurologic surgery (174).

A key number has been assigned to each approved board, such as A. B. 1, and the biographic records of physicians published in the American Medical Directory includes by these means reference to those certified.

The Council on Medical Education and Hospitals and representatives of the various boards, and the Advisory Board for Medical Specialties, annually hold a joint session for the interchange of ideas and the discussion of problems of mutual interest. These meetings have proved to be worth while contributions to the improvement of medical education and medical practice in this country.

TABLE 27.—*Approved Examining Boards in Medical Specialties*

Key No.	Name of Board	Year of Incorporation	Total Certificates Awarded to March 1, 1945	Total Certificates Awarded to March 1, 1946
A.B. 1.	American Board of Pediatrics..... Pres., Edward B. Shaw, 384 Post St., San Francisco Sec., Lee F. Hill, 3309 Forest Ave., Des Moines, Iowa	1933	2,318	2,420
A.B. 2.	American Board of Psychiatry and Neurology ..... Pres., Hans H. Reese, Wisconsin Psychiatric Institute, Madison Sec., Francis J. Braceland, Mayo Clinic, Rochester, Minn.	1934	1,899	2,027
A.B. 3.	American Board of Orthopaedic Surgery ..... Pres., Guy A. Caldwell, 3503 Prytania St., New Orleans Sec., Col. F. M. McKeever, 1136 W. 6th St., Los Angeles 14	1934	896	940
A.B. 4.	American Board of Dermatology and Syphilology ..... Pres., Howard Fox, 140 E. 54th St., New York City Sec., George M. Lewis, 66 E. 66th St., New York City	1932	710	753
A.B. 5.	American Board of Radiology..... Pres., J. W. Pierson, 1107 St. Paul St., Baltimore Sec., B. R. Kirklin, 102-110 Second Ave. S.W., Rochester, Minn.	1934	2,095	2,198
A.B. 6.	American Board of Urology..... Vice Pres., Clarence G. Bandler, 440 Park Ave., New York City Sec., Gilbert J. Thomas, 1409 Willow St., Minneapolis	1935	1,018	1,050
A.B. 7.	American Board of Obstetrics and Gynecology .... Pres., Walter T. Dannreuther, 580 Park Ave., New York City Sec., Paul Titus, 1015 Highland Bldg., Pittsburgh 6	1930	1,871	1,965
A.B. 8.	American Board of Internal Medicine Chairman, Reginald Fitz, 319 Longwood Ave., Boston Asst. Sec., William A. Werrell, 1 West Main St., Madison 3, Wis.	1936	3,541	3,906
A.B. 9.	American Board of Pathology..... Pres., A. H. Sanford, 102 Second Ave., S.W., Rochester, Minn. Sec., F. W. Hartman, Henry Ford Hospital, Detroit	1936	1,047	1,240
A.B. 10.	American Board of Ophthalmology Chairman, Edward C. Ellett, 130 Madison Ave., Memphis, Tenn. Sec., S. Judd Beach, 56 Ivie Rd., Cape Cottage, Me.	1917	2,437	2,490
A.B. 11.	American Board of Otolaryngology Pres., Harris P. Mosher, 127 Front St., Marblehead, Mass. Sec., Dean M. Lierle, University Hospital, Iowa City	1924	3,848	3,886
A.B. 12.	American Board of Surgery..... Chairman, Vernon C. David, 59 E. Madison St., Chicago Sec., J. Stewart Rodman, 225 S. 15th St., Philadelphia	1937	2,499	2,620
A.B. 13.	American Board of Anesthesiology Pres., Philip D. Woodbridge, Reading Hospital, Reading, Pa. Sec., Paul M. Wood, 745 Fifth Ave., New York City 22	1938	249	276
A.B. 14.	American Board of Plastic Surgery Chairman, George M. Dorrance, 2101 Spruce St., Philadelphia Sec., James Barrett Brown, 400 Metropolitan Bldg., St. Louis 3	1937	161	163
A.B. 15.	American Board of Neurological Surgery ..... Chairman, Howard C. Naffziger, 384 Post St., San Francisco Sec., Paul C. Bucy, 912 S. Wood St., Chicago 12	1940	163	174
	Totals.....		24,752	26,108
	Advisory Board for Medical Specialties Pres., Paul Titus, 1015 Highland Bldg., Pittsburgh 6 Sec., B. R. Kirklin, 102-110 Second Ave., S.W., Rochester, Minn.			

Certification in the subspecialties: By the American Board of Internal Medicine: allergy 81, cardiovascular disease 338, gastroenterology 171, tuberculosis 147. By the American Board of Surgery: proctology 72. Total certified in the subspecialties, 809. These figures are included in the foregoing tabulation.

APPROVED MEDICAL SCHOOLS

ARKANSAS

Little Rock

UNIVERSITY OF ARKANSAS SCHOOL OF MEDICINE, 1209 McAlmont Street.—Organized in 1879 as the Medical Department of Arkansas Industrial University. Present title in 1899. In 1911 the College of Physicians and Surgeons united with it and it became an integral part of the University of Arkansas. The first class was graduated in 1880. Clinical teaching was suspended in 1918 but resumed in 1923. Coeducational since organization. The faculty consists of 34 professors and 115 lecturers and instructors, a total of 149. The curriculum covers four sessions of nine months each. Entrance requirements are two years of collegiate work. The B.S. degree is conferred at the end of the second year. An accelerated program, adopted July 1, 1943, involving the admittance and graduation of a class approximately every nine months, was discontinued July 1, 1946. The fees for the four years for residents of Arkansas are $280 a year; nonresidents are charged $225 additional each year. The registration for the 1945-1946 session was 248. The last session began Oct. 1, 1945 and ended June 21, 1946. The next session will began Sept. 30, 1946 and will end June 23, 1947. The Dean is Byron L. Robinson, M.D.

CALIFORNIA

Berkeley-San Francisco

UNIVERSITY OF CALIFORNIA MEDICAL SCHOOL, University Campus, Berkeley; Medical Center, San Francisco 22.—Organized in 1864 as the Toland Medical College. The first class graduated in 1864. In 1873 it became the Medical Department of the University of California. In 1909, by legislative enactment, the College of Medicine of the University of Southern California, at Los Angeles, became a clinical department but was changed to a graduate school in 1914. In 1915 the Hahnemann Medical College of the Pacific was merged and elective chairs in homeopathic materia medica and therapeutics were provided. Coeducational since organization. Three years of collegiate work are required for admission. The work of the first year is given at Berkeley and that of the last three years at San Francisco. The medical course consists of four academic years, each containing two semesters of sixteen weeks each. The faculty is composed of 176 professors and 311 associates and assistants, a total of 487. The fees average $315 per academic year. Nonresidents are charged $250 additional each year. An accelerated program was adopted June 15, 1942 and deceleration began in July 1946. The registration for the 1945-1946 session was 276. The last session began Oct. 29, 1945 and ended June 22, 1946. The next class will begin Sept. 19, 1946 and will end June 21, 1947. The Dean is Francis Scott Smyth, M.D., San Francisco.

Loma Linda-Los Angeles

COLLEGE OF MEDICAL EVANGELISTS, Loma Linda; Boyle and Michigan Avenues, Los Angeles 33.—Organized in 1909. The first class graduated in 1914. The laboratory departments are at Loma Linda; the clinical departments at Los Angeles. Coeducational since organization. Three years of collegiate work are required for admission. The faculty is composed of 39 professors and 400 associate professors, assistant professors, instructors and assistants—making a total of 439. The course during the war covered a period of three years and consisted of four nine month academic sessions and an additional nine or twelve month internship in an approved hospital. Beginning with the close of the academic session in June 1946 deceleration was effected and the course will cover four years and consist of four nine month academic sessions and an additional twelve month internship in an approved hospital. The total fees are respectively, $603, $592, $612 and $620. The registration for 1945-1946 was 339. The last session for freshman and sophomore students began Oct. 5, 1945 and ended July 8 and June 28, 1946 respectively. The last session for the junior and senior students began Oct. 7, 1945 and ended on June 28 and June 30, 1946 respectively. The next session for the freshmen, sophomores and juniors will begin on Sept. 22, 1946 and will end June 27, 1947. The senior session began July 1, 1946 and will end June 22, 1947. The president is Walter E. Macpherson, M.D., Los Angeles. The deans are Harold Shryock, M.D., Loma Linda and W. F. Norwood, Ph.D., Los Angeles.

Los Angeles

UNIVERSITY OF SOUTHERN CALIFORNIA SCHOOL OF MEDICINE, 3551 University Avenue, Zone 7.—Organized in 1895 as the University of Southern California College of Medicine. First class graduated in 1888. In 1908 it became the Los Angeles Medical Department of the University of California. In 1909 the College of Physicians and Surgeons, established in 1904, became the Medical Department of the University of Southern California. Its activities were suspended in 1920; reorganized in May 1928, under present title. Entrance requirements are approximately 90 semester hours. The faculty consists of 189 professors, associate professors and assistant professors and 241 instructors, assistants and lecturers—a total of 430. An internship is required for graduation. Coeducational since organization. Annual fees amount to approximately $562. An accelerated program was adopted June 15, 1942 and deceleration will begin Sept. 16, 1946. The registration for 1945-46 was 253; graduates 63. The last session for freshmen and sophomores began Aug. 6, 1945 and ended May 10, 1946 and for juniors and seniors the last session began Aug. 13, 1945 and ended May 10, 1946 and July 5, 1946, respectively. The next session will begin Sept. 16, 1946 and will end June 14, 1947. The Dean is Burrell O. Raulston, M.D.

Stanford University-San Francisco

STANFORD UNIVERSITY SCHOOL OF MEDICINE, University Campus, Stanford University; 2398 Sacramento Street, San Francisco. The main buildings are in San Francisco. The laboratories of anatomy, bacteriology and experimental pathology, chemistry, and physiology are located on the campus at Stanford University, which is thirty miles southeast of San Francisco adjoining the City of Palo Alto. The post office is Stanford University. Organized in 1908, when by agreement the interests of Cooper Medical College were taken over. The first class graduated in 1913. Coeducational since organization. The faculty consists of 138 professors and 190 lecturers, assistants and others, a total of 328. Three years of collegiate work are required for admission. The quarter plan is in operation. An internship is a requirement for graduation. An accelerated program was adopted June 7, 1942 and deceleration began June 29, 1946. The average fee for each of the four years is $435. The registration for 1945-46 was 236. The last session for all classes began Oct. 8, 1945 and ended June 12, 1946 for freshmen and June 21, 1946 for second, third and fourth year students. The next session will begin Sept. 23, 1946 and will end June 14, 1947. The Dean is Loren Roscoe Chandler, M.D.

COLORADO

Denver

UNIVERSITY OF COLORADO SCHOOL OF MEDICINE, 4200 East Ninth Avenue.—Organized in 1883. Classes were graduated in 1885 and in all subsequent years except 1898 and 1899. Denver and Gross College of Medicine was merged Jan. 1, 1911. Coeducational since organization. The faculty is composed of 114 professors and 183 lecturers, instructors and assistants, a total of 297. The accelerated program was adopted June 15, 1942 and deceleration will begin in September 1946. The entrance requirements are three years of collegiate work. The fees average $283 per academic year. Nonresidents are charged $82 additional each year. The registration for 1945-46 was 232; graduates 54. The last session began July 2, 1945 and ended March 21, 1946. The next session will begin Sept. 30, 1946 and will end June 9, 1947. The Dean is Ward Darley, M.D.

CONNECTICUT

New Haven

YALE UNIVERSITY SCHOOL OF MEDICINE, 333 Cedar Street.—Chartered in 1810 as the Medical Institution of Yale College. Organized in 1812; instruction began in 1813; first class graduated in 1814. A new charter in 1879 changed the name to the Medical Department of Yale College. In 1884, the Connecticut Medical Society surrendered such authority as had been granted by the first charter. In 1887, Yale College became Yale University. Coeducational since 1916. The faculty consists of 199 professors and 175 lecturers and assistants, a total of 374. Of this number 27 are on leave of absence for war service and about 29 others have entered the armed forces upon completion of or during appointments. The requirements for admission are three years of collegiate work. An accelerated program was adopted June 29, 1942 and deceleration began March 28, 1946. The fees average $606 per academic year. The registration for 1945-1946 was 244; graduates 59. The last session for freshmen began Sept. 24, 1945 and ended June 12, 1946; the last session for sophomores, juniors and seniors began June 25, 1945 and ended March 16, 1946. The next session will commence Sept. 16, 1946 for freshmen and sophomores and will end June 11, 1947. The junior and senior class began March 28, 1946 and will end June 11, 1947. The Dean is Francis G. Blake, M.D.

DISTRICT OF COLUMBIA

Washington

GEORGETOWN UNIVERSITY SCHOOL OF MEDICINE, 3900 Reservoir Road, N.W., Zone 7.—Organized in 1851. First class graduated in 1852. The faculty is composed of 48 professors, 50 associate professors, 25 assistant professors, 12 adjunct professors and 151 instructors, a total of 286. Three years of premedical work are required for admission. The fees average $520 per academic year. Registration for 1945-1946 was 354, graduates 81. An accelerated program was adopted June 29, 1942 and deceleration began March 17, 1946. The last session for freshmen began Sept. 10, 1945 and ended May 25, 1946; the sophomore, junior and senior classes began July 9, 1945 and ended March 16, 1946. The next session will begin Sept. 16, 1946 and will end June 7, 1947. The Dean is David V. McCauley, S.J., Ph.D.

GEORGE WASHINGTON UNIVERSITY SCHOOL OF MEDICINE, 1335 H Street, N.W.—Organized in 1825 as the Medical Department of Columbian College. Also authorized to use the name "National Medical College." Classes were graduated in 1826 and in all subsequent years except in

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1834-1838 and 1861-1863 inclusive. The original title was changed to Medical Department of Columbian University in 1873. In 1903 it absorbed the National University Medical Department. In 1904 by an Act of Congress the title of George Washington University was granted to the institution. Coeducational since 1884. The faculty is composed of 81 professors and 150 instructors, demonstrators and assistants, a total of 231. Sixty semester hours of college work are required for admission for 1945-46 and ninety hours will be required for the session beginning September 1947. The fees average $350 per academic year. An accelerated program was adopted June 8, 1942 and deceleration began March 9, 1946. The registration for 1945-46 was 325; graduates, 83. The last session for freshmen began Sept. 17, 1945 and ended June 15, 1946; the last session for sophomores, juniors and seniors began June 18, 1945 and ended March 9, 1946 for the sophomores and juniors and Feb. 22, 1946 for seniors. The next session for all classes will begin Sept. 30, 1946 and will end June 1, 1947. The Dean is Walter A. Bloedorn, M.D.

HOWARD UNIVERSITY COLLEGE OF MEDICINE, Fifth and W Streets, N.W.—Chartered in 1867. Organized in 1869. The first class graduated in 1871. Coeducational since organization. Negro students compose a majority of those in attendance. The faculty comprises 38 professors and 74 instructors and assistants, a total of 112. The admission requirements are at least two years of collegiate work. The course covers four years of thirty-three weeks each. The fees are, respectively, $334, $334, $324 and $331. An accelerated program was adopted June 12, 1943 and deceleration began June 7, 1946. The registration for 1945-1946 was 274. The last class began Sept. 29, 1945 and ended June 7, 1946. The next session will begin Sept. 28, 1946 and will end June 6, 1947. The Dean is Joseph L. Johnson, M.D.

GEORGIA

Atlanta

EMORY UNIVERSITY SCHOOL OF MEDICINE, 50 Armstrong Street, Zone 3.—Organized in 1854 as the Atlanta Medical College. Classes graduated 1855 to 1861, when it suspended. Reorganized in 1865. A class graduated in 1865 and each subsequent year except 1874. In 1898 it merged with the Southern Medical College (organized in 1878), taking the name of Atlanta College of Physicians and Surgeons. In 1913 it merged with Atlanta School of Medicine (organized in 1905), reassuming the name of Atlanta Medical College. Became the School of Medicine of Emory University in 1915. Three years of collegiate work are required for admission. The course of study is four academic years of thirty-two weeks each. The fees for each of the four academic years are $500. An accelerated program was adopted June 15, 1942 and deceleration began in March 1946. The registration for 1945-46 was 237, graduates, 64. The last session for freshmen began Sept. 24, 1945 and ended June 15, 1946; the last session for sophomores, juniors and seniors began July 2, 1945 and ended March 19, 1946. The next session for freshman and sophomore classes will begin Sept. 24, 1946 and will end June 13, 1947; for other classes sessions began March 25, 1946 and will end March 15, 1947. The Dean is Eugene A. Stead, Jr., M.D.

Augusta

UNIVERSITY OF GEORGIA SCHOOL OF MEDICINE, University Place.—Organized in 1828 as the Medical Academy of Georgia, the name being changed to the Medical College of Georgia in 1829. After 1873 it was known as the Medical Department of the University of Georgia. On July 1, 1933, the name was changed to the University of Georgia School of Medicine. Property transferred to the University in 1911. Classes were graduated in 1833 and all subsequent years except 1862 and 1863. Coeducation was begun in 1920. The faculty includes 29 professors and 57 associate and assistant professors, instructors, lecturers and assistants, a total of 86. Of this number two are on military leave. Three years of collegiate work are required for admission. An accelerated program was adopted July 1, 1942 and deceleration began in April 1946. The fees average $325 per academic year for residents of Georgia; nonresidents $443. The registration for the 1945-46 session was 286; graduates 68. The last session for the upper classes began July 9, 1945, and ended March 23, 1946; the first year class entered Sept. 27, 1945 and ended June 8, 1946. The present session for the third and fourth year classes began April 11, 1946 and will end March 24, 1947; the first and second year classes will begin Sept. 9, 1946 and will end June 19, 1947. The Dean is G. Lombard Kelly, M.D.

ILLINOIS

Chicago

LOYOLA UNIVERSITY SCHOOL OF MEDICINE, 706 South Wolcott Avenue.—Organized in 1915 by acquisition of Bennett Medical College which had been organized in 1869. Facilities enlarged upon by acquisition of Chicago College of Medicine and Surgery, faculties in basic sciences put on full time basis and present title assumed in 1917. Operated as an organic part of Loyola University. Coeducational since organization. The faculty is composed of 34 professors and 286 associate and assistant professors, associates, instructors and assistants, a total of 320. Ninety semester hours of collegiate work are required for admission. The fees for the academic year beginning Sept. 30, 1946 will be $600.00. An accelerated program was adopted July 6, 1942 and deceleration began Oct. 1, 1945. The registration for 1945-46 was 309, graduates 68. The last session for freshmen began Oct. 1, 1945 and ended July 13, 1946; the session for sophomores and juniors began July 5, 1945 and ended April 17, 1946; the session for seniors began July 5, 1945 and ended March 16, 1946. The present session for juniors and seniors began April 29, 1946 and will end March 29, 1947 and Feb. 7, 1947 respectively. The next session for freshmen and sophomores will begin Sept. 30, 1946 and will end June 28, 1947. The Dean is James J. Smith, M.D.

NORTHWESTERN UNIVERSITY MEDICAL SCHOOL, 303 East Chicago Avenue.—Organized in 1859 as the Medical Department of Lind University. First class graduated in 1860. In 1864 it became independent as the Chicago Medical College. It united with Northwestern University in 1869 but retained the name of Chicago Medical College until 1891, when the present title was taken. Became an integral part of Northwestern University in 1905. Coeducational since 1926. The faculty comprises 30 professors, 148 associate and assistant professors and 465 associates, instructors and clinical assistants, a total of 643. The requirement for admission is 85 semester hours of collegiate work. The B.S. in medicine degree may be conferred before the end of the senior year. A hospital internship is required for graduation. An accelerated program was adopted June 17, 1942 and deceleration began July 1, 1946. The total fees are $500 each year. The registration for 1945-46 was 565; graduates, 155. The last session for sophomores, juniors and seniors began June 27, 1945 and ended March 20, 1946; the last session for freshmen began Oct. 1, 1945 and ended June 15, 1946. The present session began March 27, 1946 for juniors and seniors; and will begin Sept. 27, 1946 for freshmen and sophomores and will end June 14, 1947. The Dean is J. Roscoe Miller, M.D.

UNIVERSITY OF CHICAGO, THE SCHOOL OF MEDICINE, Fifty-Eighth Street and Ellis Avenue.—Organized in 1924, as a part of the Ogden Graduate School of Science of the University of Chicago. In 1932, when the University of Chicago reorganized its departments, the medical departments were included in the Division of Biological Sciences. The work of the first two years in the medical courses has been given on the University Quadrangles since 1899; but the last two years were offered only at Rush Medical College which was affiliated with the university until 1927 when actual work in the clinical departments on the campus began. After that time, candidates for the degree of Doctor of Medicine could take the work of the first two years on the campus and the work of the third and fourth years either on the campus or at the Rush Medical College. In June 1940 Rush Medical College became affiliated with the University of Illinois College of Medicine. All undergraduate instruction is now given only on the campus of the University of Chicago. The faculty of the School of Medicine is composed of 90 professors, 125 associates, instructors and others, a total of 214. The requirements for admission are 90 semester hours of collegiate work. The B.S. degree may be obtained during the second year. The curriculum covers twelve quarters of work. Sixty-five students are admitted to the first year class each year. The tuition fee averages $595. The registration for 1945-1946 was 247; graduates, 58. Quarters begin in March, June, September and December of each year. All correspondence relating to general policies should be addressed to A. C. Bachmeyer, M.D., Associate Dean of the Biology Division, and that pertaining to student affairs to F. J. Mullin, Ph.D., Dean of Students.

UNIVERSITY OF ILLINOIS COLLEGE OF MEDICINE, 1853 West Polk Street, Zone 12.—Organized in 1882 as the College of Physicians and Surgeons. The first class graduated in 1883. It became the Medical Department of the University of Illinois by affiliation in 1897. Relationship with the university was canceled in June 1912, and was restored in March 1913, when the present title was assumed. The staff of the Rush Medical College was incorporated in the University of Illinois College of Medicine in 1942 and at the same time Presbyterian Hospital, Chicago, became a teaching unit of the university. Coeducational since 1898. Three years of collegiate work are required for admission. The B.S. in medicine degree is conferred at the end of the second year. The faculty is composed of 250 professors and 250 associates, instructors and assistants, a total of 500. An accelerated program was adopted June 15, 1942 and deceleration began in June 1946. The fees for residents of Illinois average $291 per academic year; non-residents pay an additional fee of $150. The registration for the 1945-1946 session was 647. The last session began Oct. 1, 1945 and ended June 21, 1946. The next session will begin Sept. 30, 1946 and will end June 20, 1947. The Vice President is Andrew C. Ivy, M.D.

INDIANA

Bloomington-Indianapolis

INDIANA UNIVERSITY SCHOOL OF MEDICINE, Bloomington, 1040 West Michigan Street, Indianapolis.—Organized in 1903 but did not give all the work of the first two years of the medical course until 1905. In 1907, by union with the State College of Physicians and Surgeons, the complete course in medicine was offered. In 1908 the Indiana Medical College, which was formed in 1905 by the merger of the Medical College of Indiana (organized in 1878), the Central College of Physicians and Surgeons (organized in 1879), and the Fort Wayne College of Medicine (organized in 1879) merged into it. The first class was graduated in 1908. Coeducational since organization. The B.S. degree in anatomy and physiology is conferred. Three years of college work are required for admission. Each calendar year is divided into three semesters. The work given in two semesters is equivalent to the work formerly given in a year. The work of the first two semesters is given at Bloomington; the remainder of the work at Indianapolis. An accelerated program was adopted May 12, 1942 and deceleration began April 23, 1946. Regular fee for two semesters of work is $221 for residents of Indiana and $426 for nonresidents. The registration for the 1945-1946 session was 350. The last session began Sept. 3, 1945 and ended April 23, 1946. The next session will begin Sept. 23, 1946 and will end June 11, 1947. The Exec. Sec., Admin. Com., is John D. Van Nuys, M.D., Indianapolis.

IOWA

Iowa City

STATE UNIVERSITY OF IOWA COLLEGE OF MEDICINE, University Campus.—Organized in 1869. First session began in 1870. First class graduated in 1871. Absorbed Drake University College of Medicine in 1913. Coeducational since 1870. The faculty is made up of 56 professors, 74 lecturers, demonstrators and assistants, a total of 130. Three years of collegiate work are required for admission. The B.A. degree in the combined course of liberal arts and medicine is conferred. An accelerated program was adopted May 11, 1942 and deceleration began June 15, 1946. The tuition fee is $230 each year for residents of Iowa and $490 for nonresidents. The registration for 1945-1946 was 293; graduates 67. The last session for sophomores, juniors and seniors began July 2, 1945 and ended March 23, 1946; the last freshman class began Sept. 24, 1945 and ended June 22, 1946. The present session began on April 1, 1946 for juniors and seniors and will end March 15, 1947, and will begin on Sept. 23, 1946 for freshmen and sophomores and will end June 6, 1947. The Dean is Ewen Murchison MacEwen, M.D.

KANSAS

Lawrence-Kansas City

UNIVERSITY OF KANSAS SCHOOL OF MEDICINE, Lawrence, 39th Street and Rainbow Boulevard, Kansas City.—Organized in 1880. It offered only the first two years of the medical course until 1905, when it merged with the Kansas City (Mo.) Medical College, founded in 1869, the College of Physicians and Surgeons, founded in 1894, and the Medico-Chirurgical College, founded in 1897. Absorbed Kansas Medical College of Topeka in 1913. The first class graduated in 1906. The clinical courses are given in Kansas City. Coeducational since 1880. The faculty includes 82 professors and 130 instructors, assistants, and others, a total of 212. The requirement for admission is three years of collegiate work. An accelerated program was adopted in June 1942 and deceleration began June 21, 1946. The annual fees average $200 per year at Lawrence Division and $250 per year at Kansas City Division. The nonresident fees are $500 per year at the Kansas City Division. The registration for 1945-1946 was 291; graduates 75. The last session for sophomore, junior and senior classes began on July 2, 1945 and ended March 9, 1946. The last freshman class began Sept. 17, 1945 and ended June 15, 1946. The subsequent session began on March 18, 1946 for juniors and seniors, and will begin on Sept. 20, 1946 for sophomores and freshmen. The Dean is Harry R. Wahl, M.D., Kansas City.

KENTUCKY

Louisville

UNIVERSITY OF LOUISVILLE SCHOOL OF MEDICINE, 101 West Chestnut Street, Zone 2.—Organized in 1837 as Louisville Medical Institute. The first class graduated in 1838, and a class graduated each subsequent year except 1863. In 1846 the name was changed to University of Louisville Medical Department. In 1907 it absorbed the Kentucky University Medical Department; in 1908, the Louisville Medical College, the Hospital College of Medicine and the Kentucky School of Medicine. In 1922 it changed its name to the University of Louisville School of Medicine. Coeducational since organization. Two years of collegiate work are the minimum requirements for admission. Preference is given applicants with a degree or three college years leading to a degree. The faculty numbers 106 professors and 133 assistants, instructors and others, a total of 239. An accelerated program was adopted July 1, 1942 and deceleration will begin in the fall of 1947. Fees are $450 for residents of Louisville and Jefferson County and $550 for nonresidents, per school year. The registration for 1945-1946 was 351; graduates 91. The last session began on July 11, 1945 and ended March 23, 1946. The present session began on April 1, 1946 and will end on Dec. 21, 1946. The subsequent session will begin on Jan. 6, 1947 and will end on Sept. 20, 1947. The Dean is John Walker Moore, M.D.

LOUISIANA

New Orleans

LOUISIANA STATE UNIVERSITY SCHOOL OF MEDICINE, 1542 Tulane Avenue, Zone 13.—Organized January 1931 as Louisiana State University Medical Center. Present title in 1939. Coeducational. First session October 1931, with students of first and third year. Faculty comprises 21 professors and 113 associate professors, assistant professors, instructors and assistants, a total of 134. Course covers four sessions of not less than 32 weeks each. A minimum of three years collegiate work is required for admission. An accelerated program was adopted June 25, 1942 and deceleration began May 25, 1946. Total fees, $123.50 each year for residents of Louisiana; additional tuition of $400 each year for nonresidents. The registration for 1945-1946 was 310; graduates 67. The last session began June 28, 1945 for second, third and fourth year students, and Sept. 13, 1945 for first year students. The session ended March 13, 1946 for second, third and fourth year students, and May 25, 1946 for first year students. The present session began on June 10, 1946 for third and fourth year students, and will begin Sept. 10, 1946 for first and second year students. It will end March 8, 1947 for third and fourth year students, and May 31, 1947 for first and second year students. The Dean is Vernon W. Lippard, M.D.,

TULANE UNIVERSITY OF LOUISIANA SCHOOL OF MEDICINE, 1430 Tulane Avenue.—Organized in 1834 as the Medical College of Louisiana. Classes were graduated in 1835 and in all subsequent years except 1863-1865, inclusive. It became the Medical Department of the Tulane University of Louisiana in 1884. Present title in 1913. Coeducational since 1915. The faculty comprises 34 professors and 245 associate and assistant professors, instructors and assistants, a total of 279. A minimum of three years of collegiate work is required for admission. An accelerated program was adopted July 1, 1943 and deceleration began June 1, 1946. Total fees average $550 per academic year. The registration for the 1945-1946 session was 474. The last session began on Sept. 1, 1945 and ended May 15, 1946. The next session will begin Sept. 2, 1946 and will end June 11, 1947. The Dean is Maxwell E. Lapham, M.D.

MARYLAND

Baltimore

JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE, 710 North Washington Street.—The nucleus of a Medical Faculty was constituted in 1883. Systematic postgraduate instruction in pathology and bacteriology was begun in 1886. School was fully organized and opened in 1893. The first class graduated in 1897. Coeducational since organization. The faculty consists of 175 professors and 299 instructors, assistants and others, a total of 474. The requirement for admission is a collegiate degree. The course extends over four years of eight and one-half months each. An accelerated program was adopted June 1, 1942 and deceleration began March 19, 1946. The fees average $627 per academic year. The registration for 1945-1946 was 298; graduates 76. The last session began on June 8, 1945 for sophomores, juniors and seniors and ended March 19, 1946, and began on Sept. 10, 1945 for freshmen and ended May 28, 1946. The next session will begin on Sept. 30, 1946 for all classes and will end June 10, 1947. The Dean is Alan M. Chesney, M.D.

UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE AND COLLEGE OF PHYSICIANS AND SURGEONS, Lombard and Greene Streets, Zone 1.—Organized in 1807 as the College of Medicine of Maryland. The first class graduated in 1810. In 1812 it became the University of Maryland School of Medicine. Baltimore Medical College was merged with it in 1913. In 1915 the College of Physicians and Surgeons of Baltimore was merged and the present name assumed. Coeducational since 1918. The faculty consists of 52 professors and 359 associate and assistant professors and others, a total of 411. Three years of college work is required for admission. An accelerated program was adopted June 25, 1942 and deceleration began March 22, 1946. The tuition fees average $508 for residents of the state; for nonresidents approximately $150 additional. The registration for 1945-1946 was 359; graduates 97. The last session for sophomores, juniors and seniors began July 19, 1945 and ended March 22, 1946; the last freshman session began Sept. 19, 1945 and ended May 25, 1946. The next session begins for all classes Sept. 5, 1946 and will end June 7, 1947. The Acting Dean is H. Boyd Wylie, M.D.

MASSACHUSETTS

Boston

BOSTON UNIVERSITY SCHOOL OF MEDICINE, 80 East Concord Street.—Organized in 1873 as a homeopathic institution. In 1874 the New England Female Medical College, founded in 1848, was merged into it. The first class was graduated in 1874. Became nonsectarian in 1918. Coeducational since organization. Applicants are required to present a minimum of three years of premedical work. The faculty includes 27 professors, 212 associate and assistant professors, instructors and others, a total of 239. An accelerated program was adopted June 30, 1942 and deceleration began in March 1946. Total fees average $500 per year. The registration for 1945-1946 was 247; graduates 60. The last session for sophomores, juniors and seniors began June 29, 1945 and ended March 9, 1946. The last freshman class began Sept. 21, 1945 and ended June 20, 1946. The present senior class began June 3, 1946 and will end May 17, 1947. All other classes will be enrolled Sept. 19, 1946 and the session will end June 7, 1947. The Dean is Donald G. Anderson, M.D.

HARVARD MEDICAL SCHOOL, 25 Shattuck Street, Zone 15.—Organized in 1782. The first class graduated in 1788. It has a faculty of 205 members, and 498 other instructors and assistants, a total of 703. Two years of collegiate work are required for admission. The accelerated program was adopted July 1, 1942 and deceleration will begin in June 1947. The fees average $490. The registration for 1945-1946 was 492; graduates 141. The last session for seniors began June 25, 1945 and ended March 23, 1946; the last session for sophomores and juniors began July 2, 1945 and ended March 31, 1946; freshmen began Sept. 24, 1945 and the class ended June 15, 1946. The present session began April 1, 1946 for juniors and seniors and will end May 31, 1947, and Sept. 23, 1946 for freshmen and sophomores and will end June 14, 1947. The Dean is C. Sidney Burwell, M.D.

TUFTS COLLEGE MEDICAL SCHOOL, 416 Huntington Avenue.—Organized in 1893 as the Medical Department of Tufts College. The first class graduated in 1894. Coeducational since 1894. It has a faculty of 104 professors and 336 instructors, lecturers and others, a total of 440. Four academic years of college study are required for admission. An accelerated program was adopted June 15, 1942 and deceleration began in March 1946. The total fees for each of the four years, respectively, are $600. The registration for 1945-1946 was 410; graduates 103. The last session for sophomores, juniors and seniors began on July 5, 1945 and ended March 27, 1946; for freshmen on Sept. 17, 1945 and ended June 1, 1946. The present session for seniors began on April 8, 1946 and will end June 1947, and for freshmen, sophomores and juniors will begin on Sept. 25, 1946 and will end in June 1947. The Dean is Dwight O'Hara, M.D.

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MICHIGAN

Ann Arbor

UNIVERSITY OF MICHIGAN MEDICAL SCHOOL.—Organized in 1850 as the University of Michigan Department of Medicine and Surgery. The first class graduated in 1851. Present title assumed in 1915. Coeducational since 1870. It has a faculty of 28 professors, 19 associate professors, 31 assistant professors, 89 assistants, instructors and lecturers, a total of 167. The entrance requirements are ninety semester hours. An accelerated program was adopted June 15, 1942 and deceleration will begin Sept. 23, 1946. The fees average $280 per academic year; for nonresidents $450 a year. The registration for 1945-1946 session was 543. The last freshman class began Oct. 29, 1945 and ended July 20, 1946; sophomore class began July 30, 1945 and ended June 8, 1946; junior class began April 30, 1945 and ended Feb. 16, 1946; the last senior class began Dec. 4, 1944 and ended Sept. 15, 1945. The present senior class began Feb. 25, 1946 and will end Dec. 14, 1946. The next class for freshmen and sophomores will begin Sept. 23, 1946 and will end June 10, 1947. The Dean is Albert C. Furstenberg, M.D.

Detroit

WAYNE UNIVERSITY COLLEGE OF MEDICINE, 1516 St. Antoine Street.—Organized as the Detroit College of Medicine in 1885 by consolidation of the Detroit Medical College (organized in 1868) and the Michigan College of Medicine (organized in 1879). Reorganized with the title of Detroit College of Medicine and Surgery in 1913. The first class graduated in 1869. In 1918 it became a municipal institution under the control of the Detroit Board of Education. In 1934 the name was changed by action of the Detroit Board of Education to Wayne University College of Medicine, as a part of the program of consolidation of the Detroit city colleges into a university system. Coeducational since 1917. Entrance requirement is 60 semester hours from an accredited college or university. An accelerated program was adopted June 29, 1942 and deceleration will begin in the fall of 1947. The faculty consists of 46 professors, 302 lecturers and others, a total of 348. The fees average $535 for Wayne County residents, and for nonresidents $568. The registration for 1945-1946 was 252; graduates 53. The last session began July 2, 1945 and ended March 23, 1946. The present session began July 8, 1946 and will end June 14, 1947. The Dean is Hardy A. Kemp, M.D.

MINNESOTA

Minneapolis

UNIVERSITY OF MINNESOTA MEDICAL SCHOOL, Zone 14.—Organized in 1883 as the University of Minnesota College of Medicine and Surgery, reorganized in 1888 by absorption of St. Paul Medical College and Minnesota Hospital College. The first class graduated in 1889. In 1908 the Minneapolis College of Physicians and Surgeons, organized in 1883, was merged. In 1909 the Homeopathic College of Medicine and Surgery was merged. Present title in 1913. Coeducational since organization. The faculty includes 295 professors, of whom 91 are on full time appointment and 204 on part time, and 137 instructors, 17 of whom are on full time appointment and 120 on part time, a total of 432. An accelerated program was adopted June 17, 1942 and deceleration will begin in the fall of 1947. The entrance requirements are three years of university work. Students are required to meet the requirements for a degree of B.S. or B.A. before receiving the degree of Bachelor of Medicine (M.B.), which is granted at the end of the course. The M.D. degree is conferred after a year of intern work, of advanced laboratory work, or of public health work has been completed. Total fees are $231 per academic year for residents and $450 for nonresidents. The registration for 1945-1946 was 426; graduates 126. The last session began July 2, 1945 and ended March 21, 1946. The present session began April 1, 1946 and will end in December 1946. The following session will begin Jan. 6, 1947 for all classes and will end Sept. 12, 1947. The Dean is Harold S. Diehl, M.D.

MISSOURI

St. Louis

ST. LOUIS UNIVERSITY SCHOOL OF MEDICINE, 1402 South Grand Boulevard, Zone 4.—Organized in 1901 as the Marion-Sims-Beaumont Medical College by union of Marion-Sims Medical College, organized in 1890, and Beaumont Hospital Medical College, organized in 1886. First class graduated in 1902. It became the Medical School of St. Louis University in 1903. The faculty is composed of 124 professors and 217 instructors and assistants, a total of 341. The completion of three years of college study is the minimum admission requirement but students presenting meritorious credits in excess of the minimum are accepted by preference. An accelerated program was adopted June 15, 1942 and deceleration began March 16, 1946. The fees average $611 per academic year. The registration for 1945-1946 was 489; graduates 124. The last session began on June 29, 1945 and ended March 16, 1946. The next session will begin on Sept. 17, 1946 and will end on June 1, 1947. The Dean is Alphonse M. Schwitalla, S.J., Ph.D.

WASHINGTON UNIVERSITY SCHOOL OF MEDICINE, Kingshighway and Euclid Avenue, Zone 10.—Organized in 1942 as the Medical Department of St. Louis University. The first class graduated in 1843. In 1855 it was chartered as an independent institution under the name of St. Louis Medical College. In 1891 it became the Medical Department of Washington University. In 1899 it absorbed the Missouri Medical College. Coeducational since 1918. The faculty comprises 168 professors and 364 lecturers, instructors and others, a total of 532. Three years of college work is required for admission. The B.S. degree in medicine is conferred at the end of the third or fourth year. An accelerated program was adopted June 15, 1942 and deceleration began March 23, 1946. The fees average $601. The registration for 1945-1946 was 361; graduates 93. The last session for sophomores, juniors and seniors began on July 9, 1945 and ended March 30, 1946. The session for freshmen began Sept. 27, 1945 and ended June 22, 1946. The present session for juniors and seniors began on April 1, 1946 and will end June 12, 1947, and for freshmen and sophomores the next session will begin on Sept. 12, 1946 and will end on June 12, 1947. The Acting Dean is Robert A. Moore, M.D.

NEBRASKA

Omaha

CREIGHTON UNIVERSITY SCHOOL OF MEDICINE, 306 North Fourteenth Street, Zone 2.—Organized in 1892 as the John A. Creighton Medical College. The first class graduated in 1893. Present title in 1921. Coeducational since organization. It has a faculty of 79 professors and 83 instructors, lecturers and assistants, a total of 162. Sixty semester hours of collegiate work are required for admission. An accelerated program was adopted July 7, 1942 and deceleration began March 18, 1946. The tuition fees average $474 per academic year. The registration for 1945-1946 was 242; graduates 59. The last session for sophomores, juniors and seniors began July 6, 1945 and ended March 16, 1946. The last freshman class began Sept. 28, 1945 and ended June 6, 1946. The next session will begin on Sept. 27, 1946 and will end June 5, 1947. The Dean is Charles M. Wilhelmj, M.D.

UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE, Forty-Second Street and Dewey Avenue, Zone 5.—Organized in 1881 as the Omaha Medical College. The first class graduated in 1882. It became the Medical Department of Omaha University in 1891. In 1902 it affiliated with the University of Nebraska, with the present title. The instruction of the first two years was given at Lincoln and of the last two at Omaha until 1913, when the work of all four years was transferred to Omaha. Coeducational since 1882. The faculty is composed of 78 professors and 54 lecturers and instructors, a total of 132. Three years of college work are required for admission. The B.S. degree in medicine is conferred at the end of the second year. An accelerated program was adopted June 12, 1942 and deceleration will be effected. The fees average $269 per academic year. The registration for 1945-1946 was 318; graduates 75. The last session for sophomores, juniors and seniors began July 2, 1945 and ended March 23, 1946. The last session for freshmen began Sept. 21, 1945 and ended June 8, 1946. The present session for juniors and seniors began April 1, 1946. The next session for freshmen and sophomores will begin Sept. 13, 1946 and will end June 7, 1947. The Dean is Harold C. Lueth, M.D.

NEW YORK

Albany

ALBANY MEDICAL COLLEGE, 47 New Scotland Avenue.—Organized in 1838. The first class graduated in 1839. It became the Medical Department of Union University in 1873. In 1915 Union University assumed educational control. Coeducational since 1915. The faculty is composed of 92 professors, associate and assistant professors and 135 associates, instructors, assistants and others, a total of 227. The requirement for admission is three years of college work. An accelerated program was adopted July 6, 1942 and deceleration began in July 1946. The fees average $532 per academic year. The registration for 1945-1946 was 180; graduates 44. The last session began July 2, 1945 and ended March 23, 1946. The present session began March 25, 1946 for sophomores and juniors, and April 1, 1946 for seniors, and will end March 22, 1947, April 5, 1947 and May 31, 1947, respectively, and will begin Sept. 30, 1946 for freshmen and end June 21, 1947. The Dean is R. S. Cunningham, M.D.

Brooklyn

LONG ISLAND COLLEGE OF MEDICINE, 350 Henry Street, Zone 2.—Chartered in 1930, was originally organized in 1858 as the Long Island College Hospital. From the collegiate department the first class graduated in 1860 and the last class in 1930. The first class of the Long Island College of Medicine was graduated in 1931. It is coeducational. It has a faculty of 115 professors, associate, assistant, clinical and assistant clinical professors, and 310 lecturers, associates, instructors, assistants and others, a total of 425. Three years of collegiate work, including specified courses, are required for admission. An accelerated program was adopted July 6, 1942 and deceleration began in March 1946. The fees are $610 per academic year. The registration for 1945-1946 was 411; graduates 101. The last session for sophomores, juniors and seniors began June 25, 1945 and ended March 23, 1946. The last freshman class began on Sept. 24, 1945 and ended on June 8, 1946. The next session begins for freshmen and sophomores on Sept. 23, 1946 and ends June 14, 1947; for juniors and seniors the present session began April 1, 1946 and will end April 12, 1947. The President and Dean is Jean A. Curran, M.D.

Buffalo

UNIVERSITY OF BUFFALO SCHOOL OF MEDICINE, 24 High Street.—Organized in 1846. The first class graduated in 1847. It absorbed the Medical Department of Niagara University in 1898. Coeducational since organization. The faculty is composed of 111 professors and 172 associates, assistants and others, a total of 283. The minimum requirement

for admission is three years of collegiate work including certain prescribed science subjects. An accelerated program was adopted July 6, 1942 and deceleration began in June 1946. The fees for the entire course are $2,000. The registration for 1945-1946 was 306. The last session began on Oct. 1, 1945 and ended June 22, 1946. The next session will begin Sept. 30, 1946 and will end June 21, 1947. The Dean is Stockton Kimball, M.D.

New York

COLUMBIA UNIVERSITY COLLEGE OF PHYSICIANS AND SURGEONS, 630 West One Hundred and Sixty-Eighth Street.—The medical faculty of Columbia College, then known as King's College, was organized in 1767. Instruction was interrupted by the War of the Revolution. The faculty was reestablished in 1792 and merged in 1814 with the College of Physicians and Surgeons, which had received an independent charter in 1807. In 1860 the College of Physicians and Surgeons became the Medical Department of Columbia College. This merger became permanent by legislative enactment in 1891. Columbia College became Columbia University in 1896. The medical school has been coeducational since 1917. The teaching staff is composed of 324 professors and 689 instructors, demonstrators and others, a total of 1,013, including teaching staff in dentistry, nursing, public health and graduate medical education. Three years of collegiate work are required for admission. An accelerated program was adopted July 7, 1942 and deceleration began in March 1946. Fees average $535 per academic year. The registration for 1945-1946 was 458; graduates 113. The last session began on July 2, 1945 for sophomores, juniors and seniors and ended on March 23, 1946. The last session for the freshmen began on Oct. 4, 1945 and ended June 8, 1946. The present session began on March 28, 1946 for the juniors and seniors and will end June 3, 1947, and will begin on Sept. 12, 1946 for the freshmen and sophomores and will end June 3, 1947. The Dean is Willard C. Rappleye, M. D.

CORNELL UNIVERSITY MEDICAL COLLEGE, 1300 York Avenue.—Organized in 1898. Coeducational since organization. First year teaching was given formerly to approximately one third of the class at Ithaca but in 1938 this division was discontinued and all instruction is now in New York City. The faculty is composed of 207 professors and 286 instructors, assistants and others, a total of 493. All students admitted are from approved colleges for premedical training. The requirement for admission is three years of college work. An accelerated program was adopted July 8, 1942 and deceleration began in June 1946. The fees average $625 per year. The registration for 1945-1946 was 315; graduates 80. The last session began for sophomores, juniors and seniors July 11, 1945 and ended March 29, 1946. The freshman class began Oct. 1, 1945 and ended June 21, 1946. The present session for juniors and seniors began April 4, 1946 and will end March 28, 1947. Sophomore and junior classes will be enrolled Sept. 26, 1946 and will end June 19, 1947. The Dean is Joseph C. Hinsey, Ph.D.

NEW YORK MEDICAL COLLEGE, FLOWER AND FIFTH AVENUE HOSPITALS, 1 East 105th Street.—Organized in 1858. Incorporated in 1860 as the Homeopathic Medical College of the State of New York. The title New York Homeopathic Medical College was assumed in 1869; the title New York Homeopathic Medical College and Hospital in 1887; the title New York Homeopathic Medical College and Flower Hospital in 1908; the title New York Medical College and Flower Hospital in 1936; the present title of New York Medical College, Flower and Fifth Avenue Hospitals, June 22, 1938. The first class graduated in 1861. Coeducational since 1919. Three years of college work are required for admission. The school has a faculty of 114 professors and associate professors, 74 assistant professors, 320 lecturers and assistants, a total of 508. An accelerated program was adopted July 1, 1942 and deceleration began in May 1946. The fees average $664 per academic year. The registration for 1945-1946 was 458; graduates 96. The last session for sophomores, juniors and seniors began July 5, 1945 and ended June 18, 1946 for sophomores and juniors and March 22, 1946 for seniors. The last class for freshmen began on Sept. 5, 1945 and ended June 18, 1946. The next session will begin on Sept. 9, 1946 and will end June 5, 1947. The President and Dean is J. A. W. Hetrick, M.D.

NEW YORK UNIVERSITY COLLEGE OF MEDICINE, 477 First Avenue, Zone 16.—The Medical Department of New York University (then called the University of the City of New York) was organized in 1841 as the University Medical College. In 1898 it united with the Bellevue Hospital Medical College, organized in 1861, under the name of University and Bellevue Hospital Medical College. In 1935 the name was changed to New York University College of Medicine. Coeducational since 1919. The faculty is composed of 274 professors, associate, assistant, clinical, associate clinical and assistant clinical professors and 327 lecturers, instructors and others, a total of 601. Entrance requirements give preference to those who have completed not less than three full years in an approved college of arts and sciences. An accelerated program was adopted June 1, 1942 and deceleration began April 1, 1946. The fees average $600 per academic session. The registration for 1945-1946 was 517; graduates 131. The last session began July 9, 1945 for sophomores, juniors and seniors and ended March 20, 1946, and Oct. 1, 1945 for freshmen and ended June 15, 1946. The present session started April 8, 1946 for the juniors and seniors and will end in June 1947, and the first and second years will start Sept. 23, 1946 and will end in June 1947. The Dean is Currier McEwen, M.D.

Rochester

UNIVERSITY OF ROCHESTER SCHOOL OF MEDICINE AND DENTISTRY, 260 Crittendon Boulevard, Zone 7.—Organized in 1925 as the Medical Department of the University of Rochester. Coeducational since organization. The faculty is composed of 79 professors, 224 lecturers, assistants, instructors and others, a total of 303. The accelerated program has been adopted. Two years of collegiate work are required for admission. An accelerated program was adopted July 6, 1942 and deceleration began in June 1946. The fees are $500 per academic year. The registration for 1945-1946 was 258; graduates 65. The last session for sophomores, juniors and seniors began July 2, 1945 and ended March 22, 1946. The last freshman class began Oct. 1, 1945 and ended June 22, 1946. The present session began on March 25, 1946 for seniors and juniors, and will end March 15, 1947 and will begin on Sept. 16, 1946 for sophomores and freshmen, and will end June 14, 1947. The Dean is George H. Whipple, M.D.

Syracuse

SYRACUSE UNIVERSITY COLLEGE OF MEDICINE, 766 Irving Avenue, Zone 10.—Organized in 1872, when the Geneva Medical College, chartered in 1834, was removed to Syracuse, under the title "The College of Physicians and Surgeons of Syracuse University." Present title assumed in 1875, when a compulsory three year graded course was established. The first class graduated in 1873 and a class graduated each subsequent year. In 1889 the amalgamation with the university was made complete. Course extended to four years in 1896. Coeducational since organization. The faculty is composed of 67 professors and 215 associate and assistant professors, lecturers and instructors, a total of 282. Three years of a recognized college course are required for admission. An accelerated program was adopted July 9, 1942 and deceleration began July 1, 1946. The fees average $600 per academic year. The registration for 1945-1946 was 192. The last session for freshmen, sophomores, juniors and seniors began Oct. 1, 1945 and will end June 22, 1946. The next session for all classes will begin Sept. 2, 1946 and will end June 2, 1947. The Dean is H. G. Weiskotten, M.D.

NORTH CAROLINA

Durham

DUKE UNIVERSITY SCHOOL OF MEDICINE.—Organized in 1930. The first class was admitted Oct. 1, 1930. Coeducational. The faculty is composed of 13 professors and 141 associate and assistant professors, lecturers, instructors and assistants, a total of 154. The premedical requirement is three years of college work. The academic year consists of two semesters in the first year and three quarters each in the sophomore, junior and senior years. There is no summer quarter between the first and second year, but in the two clinical years the subjects of the autumn, winter and spring terms are repeated in the summer quarter. An accelerated program was adopted July 6, 1942 and starting with the summer quarter of 1946 this accelerated schedule will be optional, and students may take the two semesters of their first year, and three quarters in each of their subsequent years, and receive their certificates in four calendar years, or if they receive permission from the Curriculum Committee they may at the end of their second year take the clinical quarters given during the summers and receive their certificates in three and one quarter calendar years. The B.S. degree in medicine may be conferred for special work after six quarters. Students are urged to spend three years in hospital or laboratory work after graduation and must give assurance satisfactory to the executive committee that they will spend at least two years, Active duty with the Army, Navy or Public Health Service can replace the second year. The fees are $600 for each year of three quarters. The registration for 1945-1946 was 282; graduates 71. During 1946 the quarters begin January 2, April 1, July 1, October 7 and end March 23, June 22, September 14 and December 21. The next freshman class will be enrolled Oct. 7, 1946 and will end June 14, 1947. The Dean is Wilburt C. Davison, M.D.

Winston-Salem

BOWMAN GRAY SCHOOL OF MEDICINE OF WAKE FOREST COLLEGE, Zone 7.—Organized in 1902 at Wake Forest as a school offering only the first two years of the curriculum. In 1941 the school was moved to Winston-Salem and expanded to a complete four year medical school under its present name. Coeducational. Ninety semester hours of college work are required for admission. An accelerated program was adopted June 29, 1942 and deceleration began in June 1946. The faculty numbers 110. Tuition is $450 per school year. The registration for 1945-1946 was 190; graduates 47. The last session for sophomores, juniors and seniors began July 2, 1945 and ended March 23, 1946. The last freshman class began Sept. 26, 1945 and ended June 18, 1946. The present junior and senior class began March 27, 1946 and will end March 26, 1947 and Dec. 20, 1946, respectively. The next freshman and sophomore class will begin Sept. 25, 1946 and will end June 21, 1947. The Dean is C. C. Carpenter, M.D.

OHIO

Cincinnati

UNIVERSITY OF CINCINNATI COLLEGE OF MEDICINE, Eden and Bethesda Avenues.—Organized in 1909 by the Union of the Medical College of Ohio (founded in 1819) with the Miami Medical College (founded in 1852). The Medical College of Ohio became the Medical Department of the University of Cincinnati in 1896. Under a similar agreement, March 2, 1909 the Miami Medical College also merged with the University when the title of Ohio-Miami Medical College of the University of Cincinnati was taken. Present title assumed in 1915. Coeducational since organization. Liberal arts students of the University of Cincinnati may enroll for the seven year combined liberal arts and medical program. The B.S. degree is granted on the joint recommendation of the faculties of the College of Liberal Arts and Medicine at the end of the first medical year. The faculty consists of 112 professors, associate and assistant professors, 350 instructors, etc., a total of 462. An accelerated program was adopted

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1946

June 29, 1942 and deceleration began in April 1946. Tuition is as follows: for legal residents of Cincinnati $500 a year plus breakage fees ($50 additional for those not legal residents). The registration for 1945-1946 was 322; graduates 76. The last session for freshmen began Oct. 5, 1945 and ended June 30, 1946. The session for sophomores, juniors and seniors began June 4, 1945 and ended Feb. 23, 1946. The session for the freshmen and sophomore classes will begin Sept. 20, 1946 and will end May 31, 1947. The present session for the junior and senior classes began March 4, 1946 and will end Feb. 1, 1947. The Dean is Stanley Dorst, M.D.

Cleveland

WESTERN RESERVE UNIVERSITY SCHOOL OF MEDICINE, 2109 Adelbert Road, Zone 6.—Organized in 1843 as the Cleveland Medical College in cooperation with Western Reserve College. The first class graduated in 1844. The school assumed the present title in 1881. In 1910 the Cleveland College of Physicians and Surgeons was merged. Coeducational since 1919. The faculty includes 120 professors and 244 lecturers, assistants and others, a total of 364. The curriculum covers four scholastic years of 38 to 40 weeks each. Students are required to have three years of college work for admission. The fees average $533 per academic year. An accelerated program was adopted June 22, 1942 and deceleration will be effected. The registration for 1945-1946 was 328; graduates 82. The last session for the fourth year class began June 4, 1945, and ended March 9, 1946. The session for third year and second year students extended from June 25, 1945, to March 16, 1946, and that for freshmen from Sept. 17, 1945, to June 8, 1946. The 1946-47 session will begin Sept. 18, 1946, for the first three classes and on Sept. 2 for seniors, and the session for all classes will end June 7, 1947. The Dean is Joseph T. Wearn, M.D.

Columbus

OHIO STATE UNIVERSITY COLLEGE OF MEDICINE, Neil and Eleventh Avenues, Zone 10.—Organized in 1907 as the Starling-Ohio Medical College by the union of Starling Medical College (organized in 1847 by charter granted by the State Legislature changing the name from Willoughby Medical College, which was chartered March 3, 1834) with the Ohio Medical University (organized 1890). In 1914 it became an integral part of the Ohio State University with its present title. Coeducational since organization. The faculty consists of 125 professors, associate and assistant professors, 115 lecturers, instructors and assistants, a total of 240, of whom 28 are on military leave. Three years of collegiate work are required for admission. An accelerated program was adopted June 23, 1942 and deceleration began in June 1946. Tuition fees average $315 per academic year and $150 additional for nonresidents. The registration for 1945-46 was 311; graduates 72. The last session began on Oct. 2, 1945 and ended June 10, 1946 for freshmen; June 19, 1945 and ended March 15, 1946 for sophomores, juniors and seniors. The present session began on March 15, 1946 for juniors and seniors and will end March 15, 1947; and will begin on Oct. 1, 1946 for freshmen and sophomores and will end June 9, 1947. The Dean is Charles A. Doan, M.D.

OKLAHOMA

Oklahoma City

UNIVERSITY OF OKLAHOMA SCHOOL OF MEDICINE, 801 North East Thirteenth Street, Zone 4.—Organized in 1900. Until 1910 gave only the first two years of the medical course at Norman, Oklahoma, after which a clinical department was established at Oklahoma City by taking over the Medical School of Epworth University. The first class graduated in 1911. Coeducational since organization. A new medical school building and a second teaching hospital became available in 1928, and since September of that year the entire four year course has been given in Oklahoma City. It has a faculty of 41 professors, 35 associate professors, 36 assistant professors and 111 associates, lecturers, visiting lecturers, instructors and assistants, a total of 223. Prerequisites for admission are three years—90 semester hours. An accelerated program was adopted May 10, 1943 and deceleration began March 22, 1946. Fees: $50 "maintenance and incidental fee" per semester. Other annual course fees average $122, $99.50, $57 and $47, in the order given, beginning with the freshman year. For students not residents of Oklahoma there is a tuition charge of $350 a year, plus laboratory and course fees as indicated for the different years. The registration for 1945-1946 was 281; graduates 69. The last session began July 2, 1945 and ended March 22, 1946. The next session will begin Sept. 16, 1946 and end June 2, 1947. The Dean is Wann Langston, M.D.

OREGON

Portland

UNIVERSITY OF OREGON MEDICAL SCHOOL, Marquam Hill, Zone 1.—Organized in 1887. The first class graduated in 1888, and a class graduated each subsequent year except 1898. The Willamette University Medical Department was merged in 1913. Coeducational since organization. It has a faculty of 119 professors and 149 instructors, assistants and others, a total of 268. Entrance requirements are 90 semester hours of collegiate work. An accelerated program was adopted June 22, 1942 and deceleration began March 23, 1946. The total fees are, respectively, $388.50, $388.50, $383.50 and $390 for residents of Oregon and $60 a year additional for nonresidents. The registration for 1945-1946 was 282; graduates 68. The last session began July 2, 1945 and ended March 23, 1946. The subsequent session will begin Oct. 2, 1946 and will end June 21, 1947. The Dean is D. W. E. Baird, M.D.

PENNSYLVANIA

Philadelphia

HAHNEMANN MEDICAL COLLEGE AND HOSPITAL OF PHILADELHIA, 235 North Fifteenth Avenue, Zone 2.—Organized in 1848 as The Homeopathic Medical College of Pennsylvania. In 1869 it united with The Hahnemann Medical College of Philadelphia, taking the latter title. Assumed present title in 1885. The first class graduated in 1849. Coeducational beginning with 1941-1942 session. Three years of collegiate work in an approved college of arts and sciences are required for admission. It has a faculty of 93 professors and 111 lecturers, instructors and others, a total of 204. An accelerated program was adopted July 27, 1942 and deceleration began March 1946. Fees are respectively $555, $550, $550, and $575. The registration for 1945-1946 was 509; graduates 125. The last session began July 9, 1945 and ended March 12, 1946 for sophomores, juniors and seniors. The last session began for freshmen Oct. 1, 1945 and ended June 5, 1946. The present session began April 8, 1946 for juniors and seniors and will end March 27, 1947. The next class will begin on Sept. 30, 1946 for freshmen and sophomores and will end in June 1947. The Dean is Charles L. Brown, M.D.

JEFFERSON MEDICAL COLLEGE OF PHILADELPHIA, 1025 Walnut Street.—Organized in 1825 as the Medical Department of Jefferson College, Canonsburg, Pa. It was chartered with its present title in 1838. Classes have been graduated annually beginning in 1826. In 1838 a separate university charter was granted without change of title, since which time it has continued under the direction of its board of trustees. It has a faculty of 95 professors, associate and assistant professors and 235 associates, lecturers, demonstrators and instructors, a total of 330. For the class entering in 1947 the requirement will be two years of college work. An accelerated program was adopted June 29, 1942 and deceleration will begin Oct. 1, 1946. The total fees average $462 a year. The registration for 1945-1946 was 605; graduates 155. The last session began for sophomores, juniors and seniors on July 16, 1945 and ended March 27, 1946; freshmen began Oct. 1, 1945 ended June 17, 1946. The present session for juniors and seniors began April 15, 1946 and will end May 15, 1947; sophomore and freshman classes will begin Oct. 1, 1946 and end June 5, 1947. The Dean is William H. Perkins, M.D.

TEMPLE UNIVERSITY SCHOOL OF MEDICINE, 3400 North Broad Street, Zone 40.—Organized in 1901. The first class graduated in 1904. Coeducational since organization. The faculty numbers 37 professors and 192 associates, assistants and others, a total of 229. Three years of collegiate work are required for admission. An accelerated program was adopted July 1, 1942 and deceleration began March 21, 1946. The fees average $492 per academic year. The registration for 1945-1946 was 474; graduates, 125. The last session began July 2, 1945 and ended March 21, 1946. The next session will begin Sept. 16, 1946 and will end June 10, 1947. The Dean is William N. Parkinson, M.D.

UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE, Thirty-Sixth and Pine Streets.—Organized in 1765. Classes were graduated in 1768 and in all subsequent years except 1772 and 1775-1779, inclusive. The original title was the Department of Medicine, College of Philadelphia. The present title was adopted in 1909. It granted the first medical diploma issued in America. In 1916, it took over the Medico-Chirurgical College of Philadelphia to develop it as a graduate school. Coeducational since 1914. The faculty consists of 135 professors, associate and assistant professors, and 424 lecturers, associates, instructors and others, a total of 559. Three years of collegiate work are required for admission. The accelerated program was adopted July 27, 1942 and deceleration began in April 1946. The tuition fee is $575.00 for the academic year 1946-47 and for each subsequent year thereafter, $600.00, with a deposit fee of $15.00, a general fee including student health of $15.00 and a matriculation fee of $5.00. The registration for 1945-46 was 516; graduates 133. The last session for sophomores, juniors and seniors began on July 9, 1945 and ended March 23, 1946. The last session for freshmen began on Sept. 24, 1945 and ended June 12, 1946. The present session began April 8, 1946 for juniors and seniors and will end in March 1947; and will begin on Sept. 23, 1946 for freshmen and sophomores and end in June 1947. The Dean is Isaac Starr, M.D.

WOMAN'S MEDICAL COLLEGE OF PENNSYLVANIA, Henry Avenue and Abbottsford Road, Philadelphia 29.—Organized in 1850. Classes were graduated in 1852 and in all subsequent years except 1862. It has a faculty of 83 professors and 76 assistants, lecturers and others, a total of 159. At least three years of collegiate work are required for admission and candidates with a degree are given preference. The curriculum covers four years of eight and one-half months each. An accelerated program was adopted July 1, 1942 and deceleration began in September 1945. Total fees are $575 yearly. The registration for 1945-1946 was 162; graduates 36. The last session for freshmen, sophomores and juniors began Sept. 10, 1945 and ended June 15, 1946; for seniors April 23, 1945 to Jan. 10, 1946. The next session for all students will begin Sept. 11, 1946 and will end June 11, 1947. The Dean is Marion Fay, Ph.D.

Pittsburgh

UNIVERSITY OF PITTSBURGH SCHOOL OF MEDICINE, Bigelow Boulevard.—Organized in 1886, as the Western Pennsylvania Medical College and in 1908 became an integral part of the University of Pittsburgh, removing to the university campus in 1910. The first class graduated in 1887. Coeducation since 1899. The faculty is composed of 30 professors and 370 associates, assistants and others, a total of 400. Entrance requirements are two years of collegiate work. An accelerated program was adopted July 6, 1942 and deceleration began in April 1946. The total fees are $500 for each year. The registration for 1945-1946 was 319; graduates 78. The last session for sophomores, juniors and seniors began July 2, 1945 and ended March 23, 1946. The last freshman class began

Oct. 1, 1945 and ended June 29, 1946. The present session began on April 8, 1946 for juniors and seniors and will end March 29, 1947 and will begin on Sept. 30, 1946 for freshmen and sophomores and will end June 28, 1947. The Dean is William S. McEllroy, M.D.

SOUTH CAROLINA

Charleston

MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA, 16 Lucas Street, Zone 16.—Organized in 1823 as the Medical College of South Carolina. The first class graduated in 1825. In 1832 a medical college bearing the present title was chartered and the two schools continued as separate institutions until they were merged in 1838. Classes were graduated in all years except 1862 to 1865, inclusive. In 1913, by legislative enactment, it became a state institution. Coeducation from 1895 to 1912, when privileges for women were withdrawn, being restored in 1917. It has a faculty of 45 professors, and 48 associates, instructors, and others, a total of 93, of which 42 are on a full time basis. An accelerated program was adopted June 25, 1942 and deceleration began in April 1946. Three years of collegiate work are required for admission. The total fees are $422 each year for residents of South Carolina and $622 for nonresidents of the state. The registration for 1945-1946 was 205; graduates 42. The last session began June 25, 1945 for sophomores, juniors and seniors and Sept. 27, 1945 for freshmen, and ended March 9, 1946 for the former and June 26, 1946 for the latter. The next session will begin Sept. 26, 1946 for all classes and end June 6, 1947. The Dean is Kenneth M. Lynch, M.D.

TENNESSEE

Memphis

UNIVERSITY OF TENNESSEE COLLEGE OF MEDICINE, 874 Union Avenue, Zone 3.—Organized in 1876, at Nashville as Nashville Medical College. First class graduated in 1877, and a class graduated each subsequent year. Became Medical Department of University of Tennessee in 1879. In 1909 it united with the Medical Department of the University of Nashville to form the joint Medical Department of the Universities of Nashville and Tennessee. This union was dissolved in 1911. The trustees of the University of Nashville by formal action of that board named the University of Tennessee College of Medicine as its legal successor. In 1911 it moved to Memphis, where it united with the College of Physicians and Surgeons. The Memphis Hospital Medical College was merged in 1913, Lincoln Memorial University Medical Department was merged in 1914. Coeducational since 1911. The faculty includes 135 professors and 208 assistants, instructors and others, a total of 343. Two years of collegiate work are required for admission. The B.S. degree in medicine is conferred at the end of the second year. The fees are $210 quarterly. For residents of the state the charge is reduced $50 each quarter. The registration for 1945-1946 was 443; graduates, 99. During the next academic year the quarters begin September, January, March and June. The Dean is O. W. Hyman, Ph.D.

Nashville

MEHARRY MEDICAL COLLEGE, Eighteenth Avenue North and Meharry Boulevard, Zone 8, (For Negro Youth).—This school was organized in 1876 as the Meharry Medical Department of Central Tennessee College, which became Walden University in 1900. First class graduated in 1877. Obtained new charter independent of Walden University in 1915. Coeducational since 1876. The faculty is made up of 58 professors and 24 instructors and lecturers, a total of 82. Two years' work in a college of liberal arts are required for admission. An accelerated program was adopted June 14, 1943 and deceleration began June 30, 1946. Tuition fees are, respectively, $405, $395, $385 and $395 each year. The curriculum covers four academic years of thirty-two weeks each. In September 1942, Meharry Medical College instituted the quarter system. The registration for 1945-1946 was 232. The last session began on Sept. 27, 1945 and will end June 22, 1946. The next session begins on Sept. 30, 1946 and ends May 31, 1947. The Director of Medical Education is Murray C. Brown, M.D., the Dean is Michael J. Bent, M.D.

VANDERBILT UNIVERSITY SCHOOL OF MEDICINE, Twenty-First Avenue South at Edgehill, Zone 4.—This school was founded in 1874. The first class graduated in 1875. Coeducational since 1925. The faculty numbers 255. For matriculation, students must be graduates of collegiate institutions of recognized standing or seniors in absentia, who will receive the bachelor degree from their college after having completed successfully one year of work in the school of medicine. The course covers four academic years of nearly nine months each. An accelerated program was adopted June 10, 1942 and deceleration began in March 1946. The fees average $515.00 per academic year. The registration for 1945-1946 was 190; graduates 47. The last session began June 18, 1945 and ended March 25, 1946. The next session will begin on Sept. 23, 1946 and end June 7, 1947. The Dean is Ernest W. Goodpasture, M.D.

TEXAS

Dallas

SOUTHWESTERN MEDICAL COLLEGE OF THE SOUTHWESTERN MEDICAL FOUNDATION, 2211 Oak Lawn.—Organized in 1943. The first class graduated March 20, 1944. Coeducational since organization. It has a faculty of 136 professors (including associate and assistant professors) and 65 instructors and assistants or a total of 201. The medical college is operated on a regular program offering three trimesters of eleven weeks each per academic year. An accelerated program was adopted July 1, 1943 and deceleration will begin Sept. 30, 1946. Tuition for the academic year is $175 per trimester. Hospitalization charges are not included in this fee. Ninety semester hours are required for admission —except under unusual circumstances. Registration for 1945-1946 was 203. The last session began Oct. 1, 1945 and ended June 29, 1946. The next session will begin Sept. 30, 1946 and end June 9, 1947. The Dean is William L. Hart, M.D.

Galveston

UNIVERSITY OF TEXAS SCHOOL OF MEDICINE, 912 Avenue B.—Organized in 1891. The first class graduated in 1892. Coeducational since organization. It has a faculty of 116 professors, including associate and assistant professors and lecturers, and 66 instructors, a total of 182. An accelerated program was adopted June 22, 1942 and deceleration began in March 1946. Ninety semester hours are required for admission to the freshman class matriculating Sept. 23, 1946. The fees average $109 per academic year, including health fees for medical care and hospitalization. The registration for 1945-1946 was 358. Graduates on March 2, 1946 were 88. The last session began on Sept. 13, 1945 for freshmen and ended July 6, 1946. Other classes began on May 28, 1945 and ended Feb. 16, 1946. The present session for juniors and seniors began on March 4, 1946 and will end on Feb. 7, 1947. The next freshman and sophomore class will matriculate Sept. 23, 1946 and will end June 7, 1947. The Vice President is Chauncey D. Leake, Ph.D., and D. Bailey Calvin, Ph.D., is Dean of Student and Curricular Affairs.

Houston

BAYLOR UNIVERSITY COLLEGE OF MEDICINE, 509 Lincoln Street.—Organized in 1900 at Dallas as the University of Dallas Medical Department. In 1903 it took its present name and became the Medical Department of Baylor University. It acquired the charter of Dallas Medical College in 1904. The school was moved to Houston in 1943. Coeducational since organization. The first class graduated in 1901. Entrance requirements are 90 semester hours of collegiate work. An accelerated program was adopted July 12, 1943 and deceleration began in April 1946. The course covers four years of eight months each. The fees are, respectively, $490, $480, $468, $493. The registration for 1945-1946 was 279; graduates 88. The last session began July 30, 1945 for sophomores, juniors and seniors and ended March 25, 1946. Freshman class was enrolled Sept. 3, 1945 and ended May 6, 1946. The present session began for junior and senior classes April 15, 1946 and will end June 2, 1947. The 1946-1947 session for freshman and sophomore classes will begin Sept. 9, 1946 and end May 24, 1947. The Dean is W. H. Moursund, M.D.

UTAH

Salt Lake City

UNIVERSITY OF UTAH SCHOOL OF MEDICINE.—Organized in 1906. Coeducational since organization. Four-year curriculum established March 1943. Three years of collegiate work are required for admission. The faculty is composed of 14 professors, 29 associate professors, 30 assistant professors, 35 instructors and 18 lecturers, a total of 126. An accelerated program was adopted June 29, 1942 and deceleration will begin in 1947. The fees for each quarter are $137; there is a nonresident fee of $55 each year. The registration for 1945-1946 was 166; graduates 38. The last session for sophomores, juniors and seniors began in June 1945 and ended in March 1946. The last session for freshmen began Sept. 12, 1945 and ended June 12, 1946. The present session for freshmen and sophomores began June 11, 1946 and will end in March 1947; juniors and seniors began March 11, 1946 and will end in December 1946. The Dean is Richard H. Young, M.D.

VERMONT

Burlington

UNIVERSITY OF VERMONT COLLEGE OF MEDICINE, Pearl Street, College Park.—Organized with complete course in 1822. Classes graduated in 1823 to 1836, inclusive, when the school was suspended. It was reorganized in 1853 and classes were graduated in 1854 and in all subsequent years. Coeducational since 1920. It has a faculty of 59 professors and 52 instructors and assistants, a total of 111. Three years of college work are required for admission. An accelerated program was adopted July 6, 1942 and deceleration began April 3, 1946. For residents of Vermont the tuition fee averages $421 each session. Nonresidents are charged an additional $150 each session. A $25 fee is charged for the doctor's degree. The last session began July 5, 1945 and ended April 3, 1946 for juniors and seniors and June 30, 1946 for freshmen and sophomores. Registration for 1945-1946 was 151; graduates 37. The present senior class began April 19, 1946 and will end April 14, 1947; the next freshman, sophomore and junior classes will begin Sept. 14, 1946 and will end June 13, 1947. The Dean is William Eustis Brown, M.D.

VIRGINIA

Charlottesville

UNIVERSITY OF VIRGINIA DEPARTMENT OF MEDICINE.—Organized in 1827. Classes were graduated in 1828 and in all subsequent years except 1865. Coeducational since the session of 1920-1921. It has a faculty of 51 professors and 80 lecturers, instructors, assistants and others, a total of 131. Three years of college work are required for admission. An accelerated program was adopted June 29, 1942 and deceleration began June 15, 1946. For residents of Virginia the total fees average $388 per academic year. Nonresidents are charged an additional $50 each year. The registration for 1945-1946 was 257; graduates 65. The last session began July 6, 1945 and ended March 23, 1946. The present session began April 5, 1946 and will end June 4, 1947. The Dean is Harvey E. Jordan, Ph.D.

V 131
1946

Richmond

MEDICAL COLLEGE OF VIRGINIA, Twelfth and Marshall Streets.—Organized in 1838 as the Medical Department of Hampden Sydney College. Present title was taken in 1854. In 1913 the University College of Medicine was merged. In 1914 the North Carolina Medical College was merged. Coeducational since 1918. Classes were graduated in 1839 and in all subsequent years. It has a faculty of 118 professors and 147 lecturers, instructors and others, a total of 265. Of this group 3 professors and 5 lecturers, instructors and others are still on military leave. Three years of collegiate work are required for admission. The accelerated program was adopted July 5, 1942 and deceleration began in 1946. Fees average $409 per academic year. Nonresidents are charged an additional $150 each year. The registration for 1945-1946 was 325; graduates 89. The last session began July 9, 1945 for second, third and fourth year classes and ended March 23, 1946. The last session for the first year class began Oct. 1, 1945 and ended June 15, 1946. The subsequent session for all four classes will begin Sept. 16, 1946 and will end June 17, 1947. The Dean is J. P. Gray, M.D.

WISCONSIN

Madison

UNIVERSITY OF WISCONSIN MEDICAL SCHOOL, 418 North Randall Avenue, Zone 6.—Organized in 1907. Gave only the first two years of the medical course until 1925, when the clinical years were added. Coeducational since organization. Beginning with Sept. 24, 1945 a class will be admitted once each year. It has a faculty of 64 professors and 67 lecturers, instructors and others, a total of 131. An accelerated program was adopted July 1, 1942 and deceleration began July 1, 1946. The fees average $206 per academic year. An additional fee of $200 per year is charged nonresidents. The registration for 1945-1946 was 266; graduates 74. The last class began on Sept. 24, 1945 and ended in June 1946. The present senior class began June 24, 1946 and will end May 24, 1947; freshmen, sophomore and junior classes will begin Sept. 23, 1946 and end May 24, 1947. The Dean is William S. Middleton, M.D.

Milwaukee

MARQUETTE UNIVERSITY SCHOOL OF MEDICINE, 561 North Fifteenth Street.—Organized in December 1912 by the merger of the Milwaukee Medical College and the Wisconsin College of Physicians and Surgeons. Coeducational since organization. It has a faculty of 208. Three years of collegiate work are normally required for admission. An accelerated program was adopted July 6, 1942 and deceleration will begin in November 1946. The fees average $525 per academic year. The registration for the 1945-1946 session was 366; graduates 164. The last session began May 17, 1945 and ended in February 1946. The present session began March 4, 1946 and will end Nov. 2, 1946. The subsequent session will begin Nov. 12, 1946. The Dean is Eben J. Carey, M.D.

CANADA

Alberta

UNIVERSITY OF ALBERTA FACULTY OF MEDICINE, Edmonton.—Organized in 1913. Coeducational since organization. Has given the complete medical course since 1924. New course—three years premedical, four years medicine, one year undergraduate internship for medical degree—has been offered beginning with the session 1942-1943. The faculty includes 13 full time and 78 part time professors, instructors and assistants and others, a total of 91. Tuition for the first four years is $250 and for the fifth year $175. The registration for 1945-1946 was 111; graduates 20. The next regular session will open on Sept. 16, 1946 for the first, second, third and fourth years and will end May 10, 1947. The Dean is John J. Ower, M.D.

Manitoba

UNIVERSITY OF MANITOBA FACULTY OF MEDICINE, Bannatyne Avenue, Winnipeg.—Organized in 1883 as Manitoba Medical College; first class graduated in 1886, and a class graduated each subsequent year. The college transferred all its property to the University of Manitoba in 1919 and assumed the present title. Coeducational since organization. The faculty includes 35 professors and 99 instructors and assistants, a total of 134. Matriculation requirements include two years of collegiate work in the faculty of arts and sciences of a recognized university. An accelerated program was adopted but was discontinued with class entering in fall of 1943. The course extends over four years of eight months each and a hospital internship. The fees average $296 yearly. The registration for 1945-1946 was 247; graduates 56. The next session for the first four years will begin on Sept. 13, 1946 and will end in May 1947. Owing to the discontinuance of the accelerated program there will be no fifth year during the session. The Dean is A. T. Mathers, M.D.

Nova Scotia

DALHOUSIE UNIVERSITY FACULTY OF MEDICINE, Morris Street, Halifax.—Organized in 1867. Incorporated as the Halifax Medical College in 1875. Reorganized as an examining faculty, separate from the Halifax Medical College, in 1885. In 1911, in accordance with an agreement between the Governors of Dalhousie University and the Corporation of the Halifax Medical College, the work of the latter institution was discontinued and a full teaching faculty was established by the university. First class graduated in 1872. Coeducational since 1871. It has a faculty of 49 professors and 30 demonstrators, lecturers and others, a total of 79, 1 of whom is in active service and is on leave for the duration. Requires for matriculation two years of arts. The regular medical course covers four years and a hospital internship of one year approved by the medical faculty. The fees average $331 yearly; $250 additional registration fee payable by students outside the British Empire. The registration for 1945-1946 was 167; on account of past acceleration there was no final year. The next session for all classes will begin Sept. 10, 1946 and end May 13, 1947. The Dean is H. G. Grant, M.D.

Ontario

QUEEN'S UNIVERSITY FACULTY OF MEDICINE, Kingston.—Organized 1854. First class graduated in 1855, and a class graduated each subsequent year. The faculty numbers 62. Fees for the first year amount to $252. The course consists of five sessions of 30 teaching weeks, and a sixth year spent in a hospital designated by the University. The degrees of M.D., C.M. are not awarded until the end of the sixth year. The accelerated program has been abandoned, and the prewar time table has been resumed. Freshmen will be admitted annually. Registration for 1945-1946 was 249; graduates 41. The last session began Oct. 1, 1945 and ended May 18, 1946. The next session will begin Sept. 23, 1946 and end May 17, 1947. The last convocation was held on Feb. 15, 1946, and another class will graduate in May 1947. The Dean is G. Spencer Melvin, M.D.

UNIVERSITY OF WESTERN ONTARIO MEDICAL SCHOOL; 346 South Street, London.—Organized in 1881 as the Western University Faculty of Medicine; first class graduated in 1883, and a class graduated each subsequent year. Present title in 1923. The Faculty of Medicine has been under the control of the Board of Governors of the University of Western Ontario since 1913. Coeducational since 1913. The faculty numbers 101. The normal course of study covers two college years of nine months each and four years of ten months each in the Faculty of Medicine. The total fees to residents of Canada for the last four years respectively are $356, $356, $360 and $360; nonresidents are charged $646, $646, $650 and $650 for each of the last four years. The registration for 1945-1946 was 176; graduates 38. The last session began Sept. 10, 1945 and ended June 8, 1946. The next session begins for all years Sept. 9, 1946 and ends June 7, 1947. The Dean is G. E. Hall, M.D.

UNIVERSITY OF TORONTO FACULTY OF MEDICINE, Toronto 5.—Organized in 1843 as the Medical Faculty of King's College. Abolished in 1853. Reestablished in 1887. In 1902 it absorbed Victoria University Medical Department, and in 1903 it absorbed the Medical Faculty of Trinity University. Coeducational since 1903. The B.Sc. (Med.) degree is conferred at the end of the second or subsequent medical year. It has a faculty of 89 professors and 311 lecturers, associates and others, a total of 400. The fees are $190 for the first and second premedical years; $390 for the first, second and third medical years; $418 for the fourth medical year. The registration for 1945-1946 was 860; graduates 131. The last class began Sept. 25, 1945 and ended May 4, 1946. The next first and second premedical years will begin on Sept. 24, 1946. The first, second, third and fourth medical years will begin on Sept. 9, 1946 and end on May 31, 1947. Students in the final year graduated Feb. 22, 1946. Students will graduate annually in June hereafter. The Dean is W. E. Gallie, M.D.

Quebec

MCGILL UNIVERSITY FACULTY OF MEDICINE, 3640 University Street, Montreal.—Founded in 1823 as Montreal Medical Institution; became the Medical Faculty of McGill University in 1829; first class graduated under the university auspices in 1833. No session between 1836-1839, owing to political troubles. In 1905 it absorbed the Faculty of Medicine of the University of Bishop's College. Coeducational since 1919. Three years of collegiate work are required for admission. The faculty consists of 97 professors and 162 lecturers and others, a total of 259. The total fees for each of the four medical years are $391 plus $100 for non-British subjects. The registration for 1945-1946 was 350. The last session began Sept. 5, 1945 and ended June 1, 1946. The next session will begin Sept. 4, 1946 and will end June 1, 1947. The Dean is J. C. Meakins, M.D.

UNIVERSITY OF MONTREAL FACULTY OF MEDICINE, 2900 Mount Royal Boulevard, Montreal.—Organized in 1843 as the Montreal School of Medicine and Surgery. In 1891, by Act of Parliament, the Medical Faculty of Laval University (organized in 1878) was absorbed. Present name by Act of Parliament in 1920. A class was graduated in 1843 and each subsequent year. Coeducational since 1925. The faculty numbers 200. The requirements for admission are: First, a B.A. degree (or its equivalent); second, one year premedical in the faculty of pure sciences (or an entrance examination on the premedical subjects). An internship is required for graduation. The fees average $275 yearly. The registration for 1945-1946 was 297. The last session began Sept. 17, 1945 and ended in May 1946. The next session will begin Sept. 16, 1946 and end May 10, 1947. The Dean is Edmond Dubé, M.D.

LAVAL UNIVERSITY FACULTY OF MEDICINE, Quebec.—The Quebec School of Medicine, organized in 1848, became in 1852 the Laval University Faculty of Medicine; first class graduated in 1855, and a class graduated each subsequent year. The faculty numbers 103. The fees for each of the medical years average $226 for residents of Canada. Nonresidents are charged an extra fee of $200 each year. The premedical requirement is a B.A. degree or its equivalent. The registration for 1945-1946 was 469; graduates 70. The last session began Sept. 14, 1945 and ended May 1, 1946. The next session will begin Sept. 12, 1946 and will end June 1, 1947. The Dean is Charles Vézina, M.D.

APPROVED SCHOOLS OF THE BASIC MEDICAL SCIENCES

ALABAMA

Birmingham

MEDICAL COLLEGE OF ALABAMA.—Established in 1943 as a division of the University of Alabama. Located in Birmingham in 1944. Approved for military trainees. In 1945 assumed title to Jefferson Hospital and Hillman Hospital, Birmingham, Alabama. The Medical College of Alabama cares for all indigent patients of the county and city, maintenance of which is paid to the university on a per diem basis by the county. In 1943 appropriation included one million dollars for the building of a new medical school which will be erected as early as possible, and temporary quarters are now in the Jefferson and Hillman Hospitals. First instruction in the Medical College of Alabama started June 4, 1945, with junior class and this class will be graduated in October 1946. On Oct. 8, 1945 the School of the Basic Medical Sciences on the University Campus, established in 1920, and its faculty, was absorbed into the new Medical College of Alabama. The medical college is coeducational. Minimum entrance requirements for civilian students are three years of college work. The accelerated program started June 8, 1942, and deceleration began in 1945 with the first freshman class. The faculty of the Medical College of Alabama at this time includes 22 professors, 28 associate professors, 36 assistant professors, 51 instructors and 35 assistants, a total of 172. Tuition is as follows: for legal residents of Alabama $400 per academic year plus incidental fees of $20. Nonresidents of the state are charged an additional $100 each session. The registration for the 1945-1946 session was 124. The last class began for sophomores and juniors June 4, 1945 and ended Feb. 9, 1946. The last class for freshmen began Oct. 8, 1945 and ended in June 1946. The present junior and senior class began in February 1946 and will end in October 1946. The next freshman session will start in October 1946 and end in June 1947. The Dean is Roy R. Kracke, M.D.

MISSISSIPPI

University

UNIVERSITY OF MISSISSIPPI SCHOOL OF MEDICINE.—Organized in 1903. Coeducational since organization. A clinical department was established at Vicksburg in 1908 but was discontinued in 1910 after graduating one class. Entrance requirement is three years of collegiate work or ninety semester hours of credit. Faculty includes 7 professors, 2 associate professors, 3 assistant professors, 6 instructors, 1 adjunct professor, 10 clinical associates. Fees average $441 annually. There is a nonresident fee of $70. An accelerated program was adopted June 1, 1942 and deceleration began June 28, 1946. The last session began on Sept. 25, 1945 and ended May 25, 1946 (June 28 for sophomores). The next session will begin on Sept. 24, 1946 and will end May 30, 1947 (July 3, 1947 for sophomores). The Acting Dean is D. S. Pankratz, M.D.

MISSOURI

Columbia

UNIVERSITY OF MISSOURI SCHOOL OF MEDICINE.—Organized at St. Louis in 1845; was discontinued in 1855 but was reorganized at Columbia in 1872. Teaching of the clinical years was suspended in 1909. Coeducational since 1872. The faculty includes 27 professors and 10 instructors, lecturers and others, a total of 37. The entrance requirements are 90 semester hours of collegiate work. The B.S. degree in medicine is conferred at the end of the second year. An accelerated program was adopted June 15, 1942 and deceleration will begin Sept. 21, 1946. Total fees for the first year are $266, for the second $255. The registration for 1945-1946 was 63. The last session began for sophomores June 9, 1945 and ended March 16, 1946. The last freshman class began Sept. 22, 1945 and ended June 6, 1946. The next session begins Sept. 21, 1946 and will end June 5, 1947. The Dean is Dudley S. Conley, M.D.

NEW HAMPSHIRE

Hanover

DARTMOUTH MEDICAL SCHOOL.—Organized by Dr. Nathan Smith in 1797. The first class graduated in 1798. It is under the control of the Trustees of Dartmouth College. Courses of the third and fourth years were discontinued in 1914. The faculty consists of 30 professors and 26 instructors, a total of 56. Three years of college work and candidacy for the bachelor's degree are required for admission. Candidates for the A.B. degree in Dartmouth College may substitute the work of the first year in medicine for that of the senior year. An accelerated program was adopted May 25, 1942 and deceleration began June 29, 1946. The tuition is $550 for each year. The registration for 1945-1946 was 30. The last session began on Nov. 5, 1945 and ended June 29, 1946. The next session for both classes will begin Sept. 30, 1946 and end in June 1947. The Dean is Rolf C. Syvertsen, M.D.

NORTH CAROLINA

Chapel Hill

UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE.—Organized in 1890. Until 1902 this school gave only the work of the first two years, when the course was extended to four years by the establishment of a department in Raleigh. The first class graduated in 1903. A class was graduated each subsequent year, including 1910, when the clinical department at Raleigh was discontinued. Coeducational since 1914. Three years of college work are normally required for admission. Certificates are awarded on the completion of two years' work in medicine. The faculty is composed of 20 professors, 13 instructors and 10 lecturers, a total of 43. An accelerated program was adopted June 15, 1942 and deceleration began in June 1946. The fees for each year are $298 for the first year and $323 for the second year for residents; for nonresidents an additional fee of $100 per year. The registration for 1945-1946 was 92. The last session for the sophomore class began in June 1945 and ended in March 1946; the freshman class entered Sept. 17, 1945 and completed the first year work June 8, 1946. The next session will begin Sept. 16, 1946 and end in June 1947. The Dean is W. Reece Berryhill, M.D.

NORTH DAKOTA

Grand Forks

UNIVERSITY OF NORTH DAKOTA SCHOOL OF MEDICINE.—Organized in 1905. Offers only the first two years of the medical course. Coeducational since organization. Three years work in a college of liberal arts are required for admission. The B.S. degree in combined arts-medical course is conferred at the end of the second year. The faculty consists of 7 professors and 7 instructors, a total of 14. An accelerated program was adopted June 14, 1943 and deceleration began in June 1946. The fees are $170 each year for resident students and $340 for nonresidents. The registration, academic year 1945-1946, was 54. The last session began Sept. 24, 1945 and ended June 8, 1946. The next session will begin Sept. 23, 1946 and will end June 8, 1947. The Dean is H. E. French, M.D.

SOUTH DAKOTA

Vermillion

UNIVERSITY OF SOUTH DAKOTA SCHOOL OF MEDICAL SCIENCES.—Organized in 1907 as the University of South Dakota School of Medicine. Present title in 1937. Coeducation since organization. Offers only the first two years of the medical course. Two years work in a college of liberal arts are required for admission. Students who complete the third year of premedical work in the College of Arts and Sciences at the University of South Dakota may apply the work of the first year of medicine to the A.B. degree. The B.S. degree is conferred at the end of the second year on those students who do not hold a combination (Arts and Sciences and Medicine Course) A.B. degree. The faculty numbers 18. An accelerated program was adopted June 15, 1942 and deceleration will begin in September 1946. The tuition is $150 each year for residents and $255 for nonresidents. The registration for 1945-1946 was 49. The last session began Sept. 17, 1945 and ended June 7, 1946 for freshmen; sophomore class began June 11, 1945 and ended March 15, 1946. The next session will begin Sept. 16, 1946 and will end May 25, 1947. The Dean is Donald Slaughter, M.D.

WEST VIRGINIA

Morgantown

WEST VIRGINIA UNIVERSITY SCHOOL OF MEDICINE.—Organized in 1902, gives the first two years of the medical course, but agreement has been made for the transfer of 20 students each year to the Medical College of Virginia. Coeducational since organization. Entrance requirements are three years of collegiate work. The B.S. degree in medicine is conferred at the end of the second year. The accelerated program was adopted June 1, 1942 and deceleration began in April 1946. Faculty numbers 24. Fees for residents of the state are, respectively, $254 and $264; nonresidents, $150 additional each year. The registration for 1945-1946 was 56. The last session began for sophomores June 25, 1945 and ended March 16, 1946 and for freshmen Sept. 24, 1945 and ended June 15, 1946. The next session begins Sept. 16, 1946 and will end June 2, 1947. The Dean is Edward J. Van Liere, M.D.

CANADA

Saskatchewan

UNIVERSITY OF SASKATCHEWAN SCHOOL OF MEDICAL SCIENCES, Saskatoon.—Organized in 1926. Coeducational. Offers the first two years of the medical course. Two years of collegiate work are required for admission. The B.A. degree is conferred at the end of the second year. The medical faculty includes 8 professors and 12 lecturers and assistants, a total of 20. The fees are $170 for the first year and $220 for the second year. The registration for 1945-1946 was 47. The last session for freshmen began Oct. 1, 1945 and ended May 10, 1946, and for sophomores Sept. 10, 1945 to July 6, 1946. The next session will begin in September 1946 and freshmen classes will be completed June 21, 1947 and sophomores July 12, 1947. The Dean is W. S. Lindsay, M.B.

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1946

APPROVED INTERNSHIPS

Council on Medical Education and Hospitals of the American Medical Association

535 North Dearborn Street, Chicago 10

Revised to Aug. 17, 1946

HOSPITALS, 798. INTERNSHIPS, 8,584

The following general hospitals, investigated and approved by the Council on Medical Education and Hospitals, are considered in position to furnish acceptable intern training in accordance with standards adopted by the American Medical Association. Three types of internships are approved by the Council—rotating, mixed and straight:

1. A rotating internship is defined as one which provides supervised experience in internal medicine, surgery, pediatrics, obstetrics and their related subspecialties, together with experience in laboratory and radiologic diagnosis. 2. A mixed internship is defined as one which provides supervised experience in two or more, but not in all, of the clinical divisions named. 3. A straight internship is defined as one which provides supervised experience in a single department, although it may include limited opportunity for work in a related subspecialty. Straight internships are now approved in internal medicine, surgery, pediatrics, obstetrics (with or without gynecology) and pathology.

The hospitals approved for intern training are likewise accredited for mixed residencies which represent general house staff assignments following the internship. The plus (✚) sign indicates additional approval for residencies in specialties, as shown in the Council's list of Approved Residencies and Fellowships for Veteran and Civilian Physicians. The number of internships included in this list gives ample assurance that sufficient facilities will be available to civilian applicants and the returning medical officers who may wish to supplement their previous intern training or secure advanced assignments as second year interns or mixed residents. The 9-9-9 program of the Procurement and Assignment Service having been discontinued, the hospitals are returning to the regular internships of 12 months' duration or longer.

United States Army.

Letterman General Hospital ✚	San Francisco
Fitzsimons General Hospital ✚	Denver
Walter Reed General Hospital ✚	Washington, D. C.
Oliver General Hospital ✚	Augusta, Ga.
Percy Jones General Hospital ✚	Battle Creek, Mich.
William Beaumont General Hospital ✚	El Paso, Texas
Brooke General Hospital ✚	San Antonio, Texas
Madigan General Hospital ✚	Fort Lewis, Wash.

United States Navy.—Address applications to Surgeon General, Bureau of Medicine and Surgery, Washington, D. C.

U. S. Naval Hospital, Corona, Calif.	U. S. Naval Hospital ✚ New Orleans	U. S. Naval Hospital ✚ Newport, R. I.
U. S. Naval Hospital ✚ Long Beach, Calif.	U. S. Naval Hospital ✚ Annapolis, Md.	U. S. Naval Hospital ✚ Navy Yard, S. C.
U. S. Naval Hospital Mare Island, Calif.	U. S. Naval Hospital ✚ Bainbridge, Md.	U. S. Naval Hospital Parris Island, S. C.
U. S. Naval Hospital ✚ Oakland, Calif.	U. S. Naval Hospital ✚ (National Naval Medical Center) Bethesda, Md.	U. S. Naval Hospital ✚ Memphis, Tenn.
U. S. Naval Hospital (Santa Margarita Ranch) Oceanside, Calif.	U. S. Naval Hospital ✚ Chelsea, Mass.	U. S. Naval Hospital ✚ Corpus Christi, Texas
U. S. Naval Hospital ✚ San Diego, Calif.	U. S. Naval Hospital Portsmouth, N. H.	U. S. Naval Hospital ✚ Norfolk, Va.
U. S. Naval Hospital San Francisco	U. S. Naval Hospital ✚ Brooklyn	U. S. Naval Hospital ✚ Portsmouth, Va.
U. S. Naval Hospital ✚ Jacksonville, Fla.	U. S. Naval Hospital ✚ St. Albans, N. Y.	U. S. Naval Hospital ✚ Quantico, Va.
U. S. Naval Hospital ✚ Key West, Fla.	U. S. Naval Hospital ✚ Camp Lejeune, N. C.	U. S. Naval Hospital Bremerton, Wash.
U. S. Naval Hospital ✚ Pensacola, Fla.	U. S. Naval Hospital ✚ Philadelphia	U. S. Naval Hospital Seattle
U. S. Naval Hospital Dublin, Ga.		U. S. Naval Hospital Aiea, Hawaii
U. S. Naval Hospital ✚ Great Lakes, Ill.		U. S. Naval Hospital Pearl Harbor, Hawaii

Name of Hospital	Location	Control	Capacity	Total Patients Admitted	% Service Cases	% Private Patients Assigned to Interns	Type of Internship	Internships	Affiliated Service	Outpatient Service	Autopsy Percentage	Stipend per Month	Service Commences
ALABAMA													
Jefferson and Hillman Hospital ✚[1,3]	Birmingham	County	653	16,245	100	..	R	30	(4)	Req	30	$25	July
Norwood Hospital ✚[1]	Birmingham	Church	207	6,319	95	100	R	6	No	Req	40	$50	July
South Highlands Infirmary	Birmingham	Corp	165	5,459	7	100	R	2	No	Req	24	$75	OctJuly
Employees' Hospital of the Tennessee Coal, Iron and Railroad Company ✚	Fairfield	NPAssn	315	7,403	100	..	R	12	No	Req	30	$27.50	July
City Hospital	Mobile	Cy'Co	335	7,589	78	90	R	5	No	Req	18	$75-100	JanJuly
ARIZONA													
Good Samaritan Hospital	Phoenix	Church	235	7,827	..	..	R	4	No	Req	29	$100	July
St. Joseph's Hospital ✚[1]	Phoenix	Church	246	10,559	4	100	R	6	No	None	26	$40	July
St. Monica's Hospital ✚	Phoenix	Church	193	5,801	..	..	R	3	No	Req	23	...	July
ARKANSAS													
Baptist State Hospital ✚[1]	Little Rock	Church	340	8,527	..	100	R	9	No	None	25	$50	AprJuly
St. Vincent Infirmary	Little Rock	Church	250	8,793	15	100	R	6	No	None	21	$50	July
University Hospital ✚[1]	Little Rock	State	230	3,709	100	..	R	12	(5)	Req	47	$50	July
CALIFORNIA													
San Joaquin General Hospital ✚	French Camp	County	632	8,838	100	..	R	5	No	Req	64	...	July
General Hospital of Fresno County ✚[3]	Fresno	County	581	6,029	100	..	R	12	No	Req	25	$25(b)	July
Glendale Sanitarium and Hospital [1]	Glendale	Church	265	6,178	15	30	R	5	No	Req	26	$120(a)	July
Loma Linda Sanitarium and Hospital	Loma Linda	Church	145	4,670	..	..	R	3	No	Req	48	$104(a)	July
California Hospital ✚[1]	Los Angeles	Church	349	13,039	56	100	R	14	No	Req	42	$50	JanJuly
Cedars of Lebanon Hospital ✚[1]	Los Angeles	NPAssn	360	10,272	10	100	R	16	No	Req	42	$50	July
Hospital of the Good Samaritan ✚[1]	Los Angeles	Church	455	10,854	15	25	R	20	(6)	Req	32	$60	July
Los Angeles County Hospital ✚[1,3]	Los Angeles	County	4,011	48,835	100	..	M	124	No	Req	34	$60	July
Presbyterian Hospital—Olmsted Memorial	Los Angeles	Church	349	9,522	..	..	R	6	No	None	39	...	July
Queen of Angels Hospital ✚	Los Angeles	Church	380	10,877	..	..	R	10	No	Req	31	$50	July
St. Vincent's Hospital ✚[1]	Los Angeles	Church	300	12,342	..	100	R	9	No	None	43	$50	July
Santa Fe Coast Lines Hospital ✚	Los Angeles	NPAssn	197	4 955	100	..	R	8	(7)	Req	58	$60	July
White Memorial Hospital ✚[1,3]	Los Angeles	Church	270	9,612	..	100	R	15	No	Req	58	$87(a)	July
Highland-Alameda County Hospital ✚[1,3]	Oakland	County	511	7,434	100	..	R	24	(8)	Req	24	$40	July
Permanente Foundation Hospital ✚[1]	Oakland	NPAssn	224	8,010	..	100	R	13	No	Op	77	$75	July
Orange County General Hospital ✚[1]	Orange	County	387	2,425	99	..	R	5	No	Op	28	$110(a)	July
Collis P. and Howard Huntington Memorial Hospital ✚	Pasadena	NPAssn	244	9,396	3	100	R	7	(9)	Req	57	$55	July

Abbreviations and other references will be found on page 1321.

Name of Hospital	Location	Control	Capacity	Total Patients Admitted	% Service Cases	% Private Patients Assigned to Interns	Type of Internship	Internships	Affiliated Service	Outpatient Service	Autopsy Percentage	Stipend per Month	Service Commences
CALIFORNIA—Continued													
Sacramento County Hospital	Sacramento	County	500	6,935	100	..	R	12	No	Req	25	$50	July
San Bernardino County Charity Hospital †	San Bernardino	County	341	3,449	100	..	R	9	No	Req	40	$110	July
Mercy Hospital	San Diego	Church	423	11,876	..	..	R	8	No	None	17	...	July
San Diego County General Hospital †[3]	San Diego	County	737	6,304	100	..	R	15	No	Req	32	$80	July
Children's Hospital †[1]	San Francisco	NPAssn	285	6,742	15	100	R	10	No	Req	51	$85	July
Franklin Hospital †[1]	San Francisco	NPAssn	260	6,345	10	100	R	10	No	Op	46	$85	July
French Hospital †	San Francisco	NPAssn	218	4,866	..	100	R	8	No	Req	22	$50(b)	July
Mary's Help Hospital †	San Francisco	Church	233	6,362	9	100	R	5	No	Req	41	$100	July
Mount Zion Hospital †[1]	San Francisco	NPAssn	193	5,116	9	100	R	7	No	Req	47	$50	July
St. Joseph's Hospital [1]	San Francisco	Church	280	7,412	10	75	R	8	No	None	37	$50	AprJuly
St. Luke's Hospital †[1]	San Francisco	Church	225	6,448	10	50	R	7	No	Req	32	$40	July
St. Mary's Hospital †	San Francisco	Church	385	10,391	..	..	R	10	No	Req	32	$50	July
San Francisco Hospital †[1]	San Francisco	CyCo	1,386	16,235	100	..	R	52	(10)	Req	27	$80(a)	July
Southern Pacific General Hospital †	San Francisco	NPAssn	400	7,200	100	..	R	14	(11)	Req	33	$60	AprJuly
Stanford University Hospitals †[1]	San Francisco	NPAssn	407	10,150	46	100	S	15	No	Req	43	$25	July
United States Marine Hospital [3]	San Francisco	USPHS	617	9,291	100	..	R	13	(12)	Req	64	$142	July
University of California Hospital †[1]	San Francisco	State	309	7,553	58	42	S	20	(13)	Req	78	$25	MarJuly
Santa Clara County Hospital †[1,3]	San Jose	County	455	5,349	100	..	R	9	No	Req	23	$45(b)	July
St. Francis Hospital	Santa Barbara	Church	100	3,039	..	..	R	3	No	None	18	$50	July
Santa Barbara Cottage Hospital †[1]	Santa Barbara	NPAssn	210	5,273	..	..	R	6	No	None	63	$50	JanJuly
Santa Barbara General Hospital [1]	Santa Barbara	County	250	1,119	99	..	R	5	No	None	15	...	July
St. John's Hospital	Santa Monica	Church	140	4,376	..	..	R	3	No	None	22	...	July
Santa Monica Hospital [1]	Santa Monica	Church	220	5,617	51	100	R	8	(14)	Req	31	$50	July
COLORADO													
Colorado General Hospital †[1]	Denver	State	265	3,526	100	..	R	16	(16)	Op	78	$20	July
Denver General Hospital †	Denver	CyCo	650	9,502	100	..	R	18	No	Req	28	$30	July
Mercy Hospital [1]	Denver	Church	280	12,428	11	10	R	5	No	Op	39	$50	July
Porter Sanitarium and Hospital	Denver	Church	153	3,868	..	..	R	3	(15)	Req	35	...	July
Presbyterian Hospital †	Denver	Church	160	3,916	..	..	R	4	No	Req	28	$50	July
St. Anthony Hospital	Denver	Church	230	6,592	4	..	R	4	No	None	34	$50	July
St. Joseph's Hospital	Denver	Church	329	8,622	..	..	R	5	No	None	18	$50	July
St. Luke's Hospital †	Denver	Church	316	8,175	5	..	R	8	(16)	Req	36	$25	July
Corwin Hospital †[1]	Pueblo	NPAssn	227	4,733	..	100	R	4	No	Req	34	$50	JanJuly
CONNECTICUT													
Bridgeport Hospital †[1]	Bridgeport	NPAssn	416	10,727	15	..	R	10	No	None	27	$100	July
St. Vincent's Hospital	Bridgeport	Church	427	9,882	8	92	R	12	No	None	15	$100	July
Danbury Hospital [1]	Danbury	NPAssn	220	4,620	..	..	R	4	No	None	25	$100	JanJuly
Hartford Hospital †[1,3]	Hartford	NPAssn	912	21,949	26	34	R	23	No	Req	39	No	July
J. J. McCook Memorial Hospital †	Hartford	City	267	3,417	100	..	R	12	No	Req	27	$75	JanJuly
St. Francis Hospital †	Hartford	Church	606	15,574	17	100	R	12	No	Req	22	(b)	July
Meriden Hospital [1]	Meriden	NPAssn	176	4,184	8	74	R	4	(17)	Req	46	$100	AprJuly
Middlesex Hospital	Middletown	NPAssn	173	4,193	16	..	R	3	No	None	22	$50	July
New Britain General Hospital †	New Britain	NPAssn	238	6,915	13	..	R	6	No	Req	21	$50	July
Grace–New Haven Community Hospital, Grace Unit †[1]	New Haven	NPAssn	270	5,940	28	72	R	12	No	Req	25	$25	July
New Haven Unit †[1,3]	New Haven	NPAssn	592	10,614	56	100	S	32	No	Req	54	No	July
Hospital of St. Raphael †	New Haven	Church	460	8,988	20	10	R	6	No	Req	21	$50	July
Lawrence and Memorial Associated Hospitals †[1]	New London	NPAssn	349	5,556	30	..	R	4	No	None	18	$105	July
Norwalk General Hospital	Norwalk	NPAssn	256	6,685	8	40	R	6	No	None	22	$100	July
William W. Backus Hospital	Norwich	NPAssn	137	3,696	13	100	R	3	No	Op	27	$125	July
Stamford Hospital	Stamford	NPAssn	324	5,807	16	100	R	9	No	Req	34	$100	JanJuly
St. Mary's Hospital [1,3]	Waterbury	Church	384	7,829	12	100	R	8	No	Req	30	$75	AprJuly
Waterbury Hospital †[1]	Waterbury	NPAssn	368	8,973	11	100	R	8	No	Req	33	$50	July
DELAWARE													
Delaware Hospital †	Wilmington	NPAssn	411	8,273	25	100	R	12	No	Req	25	$100	July
Memorial Hospital †[1]	Wilmington	NPAssn	258	4,876	..	..	R	7	No	Req	44	$100	July
St. Francis Hospital	Wilmington	Church	137	2,301	14	100	R	3	No	Req	23	$125	FebJuly
Wilmington General Hospital [3]	Wilmington	NPAssn	224	4,366	25	100	R	7	No	Req	29	$100	July
DISTRICT OF COLUMBIA													
Central Disp. and Emergency Hospital †	Washington	NPAssn	325	7,114	11	90	R	14	(18)	Req	29	$10	July
Doctors Hospital [1]	Washington	Corp	305	8,505	10	100	R	8	(19)	None	67	$50	July
Freedmen's Hospital †[1,3]	Washington	USPHS	552	7,194	65	100	R	17	No	Req	93	$50	July
Gallinger Municipal Hospital †[1,3]	Washington	City	1,614	17,268	100	..	R	33	No	Op	50	...	July
Garfield Memorial Hospital †[1,3]	Washington	NPAssn	467	9,629	20	62	R	12	No	Req	79	$15(b)	July
Georgetown University Hospital †[3]	Washington	NPAssn	301	6,831	16	84	R	12	No	Req	49	$60	July
George Washington University Hospital †	Washington	NPAssn	112	2,807	6	100	R	5	No	Req	60	$15	July
Providence Hospital †[3]	Washington	Church	363	10,413	..	100	R	12	No	Req	50	$25	July
St. Elizabeths Hospital †[1,3]	Washington	Fed	7,426	2,055	100	..	R	12	(18)	Req	56	$192	July
Sibley Memorial Hospital †[1]	Washington	Church	351	10,091	..	100	R	9	No	Req	58	$50	July
Washington Sanit. and Hosp., Takoma Pk.[3]	Washington	Church	217	3,511	70	..	R	4	No	Req	31	$77(a)	July
FLORIDA													
Duval County Hospital †	Jacksonville	County	240	2,485	100	..	R	10	No	Req	20	$15(b)	July
St. Luke's Hospital †	Jacksonville	NPAssn	207	7,099	4	12	R	5	No	None	..	$65(b)	JanJuly
St. Vincent's Hospital †	Jacksonville	Church	275	9,978	3	..	R	6	No	None	23	$50	July
James M. Jackson Memorial Hospital †[3]	Miami	City	555	14,899	24	100	R	21	No	Req	30	$30	July
Orange General Hospital [1]	Orlando	NPAssn	263	5,155	8	100	R	4	No	None	29	$75	July
Tampa Municipal Hospital	Tampa	City	336	8,798	..	100	R	4	No	Req	..	$75	July
GEORGIA													
Crawford W. Long Memorial Hospital [1]	Atlanta	NPAssn	376	10,412	2	100	R	10	No	None	..	$50	JulyDec
Georgia Baptist Hospital [3]	Atlanta	Church	214	7,567	..	..	R	7	No	None	24	$65(b)	July
Grady Memorial Hospital †[3]	Atlanta	City	720	13,692	100	..	S	50	No	Req	23	$10	July
Piedmont Hospital †[1]	Atlanta	NPAssn	150	4,357	..	..	R	6	No	None	43	$50(b)	July
St. Joseph's Infirmary †	Atlanta	Church	172	5,549	65	100	R	6	No	Req	23	$100	JanJuly
University Hospital †[1]	Augusta	City	450	10,438	30	100	R	15	No	Req	..	$20	July
Columbus City Hospital	Columbus	City	339	7,420	22	100	R	6	No	Req	15	$50	July
Emory University Hospital †	Emory University	NPAssn	267	8,614	9	100	R	10	No	Req	27	$25(b)	AprJuly
Macon Hospital	Macon	CyCo	289	7,731	30	100	R	8	No	Req	17	$50	July

Abbreviations and other references will be found on page 1321.

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Name of Hospital	Location	Control	Capacity	Total Patients Admitted	% Service Cases	% Private Patients Assigned to Interns	Type of Internship	Internships	Affiliated Service	Outpatient Service	Autopsy Percentage	Stipend per Month	Service Commences
ILLINOIS													
Alexian Brothers Hospital +(c)	Chicago	Church	264	4,804	..	100	R	7	(20)	None	29	$50	JanJuly
American Hospital +1	Chicago	NPAssn	200	7,087	61	85	R	4	No	Req	25	$25	JanJuly
Augustana Hospital +	Chicago	Church	305	7,511	7	25	R	14	No	Req	28	$25	July
Belmont Community Hospital	Chicago	NPAssn	125	4,083	..	..	R	4	No	None	17	$100	July
Chicago Memorial Hospital +	Chicago	NPAssn	108	2,070	10	100	R	5	No	Req	59	$50	July
Columbus Hospital	Chicago	Church	150	3,385	15	100	R	5	(20)	None	55	$75	July
Cook County Hospital +1	Chicago	County	3,661	59,874	100	..	R	112	No	Req	39	$12	July
Edgewater Hospital +	Chicago	NPAssn	173	5,531	..	100	R	8	No	None	39	$75(b)	July
Englewood Hospital	Chicago	NPAssn	189	5,674	2	20	R	5	No	None	20	$100	July
Evangelical Hospital 1	Chicago	Church	245	7,845	..	100	R	6	No	None	22	$100	July
Garfield Park Community Hospital	Chicago	NPAssn	182	4,398	..	100	R	6	No	None	..	$75	OctJuly
Grant Hospital +1	Chicago	NPAssn	288	7,553	..	..	R	10	No	Req	19	$50	July
Henrotin Hospital +1	Chicago	NPAssn	125	3,239	..	100	R	4	No	Req	39	$75	July
Holy Cross Hospital	Chicago	Church	161	3,995	..	..	R	6	No	None	..	$100	July
Hospital of St. Anthony de Padua 1	Chicago	Church	241	6,671	3	100	R	8	No	None	27	$100	July
Illinois Central Hospital 1	Chicago	NPAssn	200	5,873	59	..	R	9	No	Req	21	$82.50	OctJuly
Illinois Masonic Hospital +1	Chicago	NPAssn	186	5,280	21	100	R	2	No	Req	28	$50	JanJuly
Jackson Park Hospital 1	Chicago	Corp	226	4,555	..	100	R	6	No	None	33	$150	July
Loretto Hospital 1	Chicago	Church	167	4,272	..	..	R	6	No	None	70	$100(b)	July
Lutheran Deaconess Home and Hospital +1	Chicago	Church	218	6,431	15	..	R	7	No	None	18	$75	July
Mercy Hospital—Loyola Univ. Clinics +1	Chicago	Church	360	8,373	10	85	R	12	No	Req	45	$25	JanJuly
Michael Reese Hospital +1	Chicago	NPAssn	705	15,004	25	..	R	40	(21)	Op	50	No	July
Mother Cabrini Memorial Hospital	Chicago	Church	154	4,049	10	50	R	4	No	None	42	$100	July
Mount Sinai Hospital +	Chicago	NPAssn	277	7,307	13	100	R	13	No	Op	41	$15	July
Norwegian-American Hospital +1	Chicago	NPAssn	231	6,228	..	..	R	6	No	None	36	$100	July
Passavant Memorial Hospital +1	Chicago	NPAssn	255	6,181	.	100	R	16	(22)	Req	61	No	July
Presbyterian Hospital +	Chicago	Church	480	11,744	..	100	R	25	No	Op	57	No	July
Provident Hospital +1	Chicago	NPAssn	180	3,892	17	100	R	8	No	Req	34	$15	July
Ravenswood Hospital +	Chicago	NPAssn	208	5,324	.	..	R	6	No	None	19	$125	JanJuly
Research and Educational Hospitals +1,3	Chicago	State	548	4,992	100	..	R	24	No	Req	89	No	AprJuly
Roseland Community Hospital	Chicago	NPAssn	125	4,374	..	..	R	4	No	None	16	$150	July
St. Anne's Hospital +	Chicago	Church	350	8,289	..	..	R	9	No	None	24	$100(b)	July
St. Bernard's Hospital	Chicago	Church	231	8,822	..	..	R	7	No	None	24	$100	July
St. Elizabeth Hospital +1	Chicago	Church	342	8,573	..	..	R	10	No	None	23	$100	July
St. Joseph Hospital +	Chicago	Church	300	7,181	..	..	R	6	No	Req	36	$50	July
St. Luke's Hospital +1	Chicago	NPAssn	585	13,987	15	100	R	39	No	Op	61	No	July
St. Mary of Nazareth Hospital +	Chicago	Church	299	10,884	8	75	R	8	No	None	39	$100	July
Swedish Covenant Hospital +1	Chicago	NPAssn	238	6,429	..	100	R	8	No	None	31	$75	July
United States Marine Hospital +2	Chicago	USPHS	306	3,376	100	..	R	6	(23)	Req	59	$142	July
University Hospital 1	Chicago	NPAssn	100	3,510	8	100	R	4	No	None	20	$15	July
University of Chicago Clinics +1,3	Chicago	NPAssn	600	11,921	.	100	R	48	No	Req	76	No	July
Walther Memorial Hospital 1	Chicago	Church	209	5,357	..	..	R	6	No	None	..	$75	OctJuly
Wesley Memorial Hospital +1	Chicago	Church	518	11,482	8	100	R	23	No	None	59	No	July
Women and Children's Hospital +2	Chicago	NPAssn	155	3,584	..	95	R	6	No.	Req	31	$30-75	JanJuly
Woodlawn Hospital 1	Chicago	NPAssn	137	3,429	..	..	R	5	No	None	34	$150	JanJuly
St. Mary's Hospital 1	East St. Louis	Church	301	5,456	..	..	R	6	No	None	..	$75	July
Elmhurst Community Hospital 1	Elmhurst	NPAssn	148	5,073	..	..	R	3	No	None	45	$50	JanJuly
Evanston Hospital +	Evanston	NPAssn	292	7,569	8	100	R	18	(24)	Req	85	No	July
St. Francis Hospital +	Evanston	Church	420	9,182	5	100	R	11	No	None	31	$50	JanJuly
Little Company of Mary Hospital +	Evergreen Park	Church	265	7,802	.	100	R	4	No	None	21	$100	July
St. Joseph's Hospital	Joliet	Church	346	7,293	..	100	R	5	No	None	26	$100	July
Moline Public Hospital 1	Moline	City	246	6,177	..	100	R	3	No	None	17	$100	JanJuly
Oak Park Hospital	Oak Park	Church	184	4,570	.	..	R	5	No	None	18	$100	JanJuly
West Suburban Hospital	Oak Park	NPAssn	412	8,570	..	100	R	12	No	None	41	$50	July
Methodist Hospital of Central Illinois +	Peoria	Church	240	5,886	..	100	R	8	No	None	33	$100	July
St. Francis Hospital +1	Peoria	Church	393	14,080	10	100	R	14	No	Req	33	$75	July
St. Mary's Hospital	Quincy	Church	205	5,151	25	65	R	3	No	None	..	...	July
INDIANA													
St. Catherine Hospital	East Chicago	Church	324	8,102	..	..	R	7	No	None	28	$100(b)	July
Lutheran Hospital	Fort Wayne	Church	234	5,250	..	100	R	3	No	None	17	...	July
St. Joseph Hospital +	Fort Wayne	Church	350	6,950	..	..	R	5	No	None	23	$50(b)	July
Methodist Hospital	Gary	Church	277	6,439	..	100	R	6	No	None	15	$150(b)	JanJuly
St. Mary's Mercy Hospital	Gary	Church	292	6,816	..	90	R	8	No	None	30	$100(b)	July
St. Margaret Hospital +	Hammond	Church	286	8,622	..	100	R	10	No	None	33	$125	July
Indianapolis City Hospital +1,3	Indianapolis	City	739	19,251	85	100	R	32	(25)	Req	38	$50	July
Indiana University Medical Center +1,3	Indianapolis	State	646	9,505	75	75	R	28	No	Op	61	$12.50	July
Methodist Hospital +	Indianapolis	Church	696	20,292	15	..	R	24	No	None	27	$25	July
St. Vincent's Hospital	Indianapolis	Church	377	10,589	..	..	R	14	No	None	24	$125(a)	July
St. Elizabeth Hospital	La Fayette	Church	329	6,503	5	98	R	6	No	None	18	$100	July
Ball Memorial Hospital +1	Muncie	NPAssn	247	6,890	..	100	R	8	No	None	42	$75	MarJuly
Memorial Hospital +	South Bend	NPAssn	275	9,180	..	..	R	6	No	Req	26	$75(b)	MarJuly
St. Joseph's Hospital 1	South Bend	Church	223	5,951	25	100	R	2	No	None	43	$75(b)	July
St. Anthony Hospital 1	Terre Haute	Church	206	4,192	2	50	R	3	No	None	16	$100	July
IOWA													
Mercy Hospital 1	Cedar Rapids	Church	169	5,262	..	..	R	2	No	None	..	$25	July
Jennie Edmundson Memorial Hospital 1	Council Bluffs	NPAssn	157	4,199	..	100	R	3	No	None	23	$75	July
Mercy Hospital 1	Council Bluffs	Church	172	4,165	..	..	R	3	No	None	..	$75	July
Broadlawns Polk County Hospital 1	Des Moines	County	167	3,842	100	..	R	10	No	Req	34	$75	July
Iowa Lutheran Hospital 1	Des Moines	Church	155	4,304	1	100	R	5	No	Req	18	$75	July
Iowa Methodist Hospital +1	Des Moines	Church	330	9,772	..	..	R	8	No	None	73	$75	July
Mercy Hospital 1	Des Moines	Church	193	6,101	..	..	R	5	No	None	..	$75	JanJuly
University Hospitals +1,3	Iowa City	State	954	16,818	100	..	R	22	No	Req	41	$25	July
St. Joseph Mercy Hospital	Sioux City	Church	300	8,327	..	100	R	5	No	Req	..	...	July
KANSAS													
Bethany Hospital 1	Kansas City	Church	180	5,352	..	100	R	6	No	Req	44	$75	July
Providence Hospital	Kansas City	Church	115	3,198	..	..	R	2	No	None	46	$50	July
St. Margaret's Hospital 1	Kansas City	Church	228	4,510	6	100	R	6	No	None	54	$50	July
University of Kansas Hospitals +1,3	Kansas City	State	400	8,247	99	..	R	12	No	Op	57	$25	July
St. Francis Hospital +	Wichita	Church	450	14,711	..	..	R	9	No	None	47	$75	July
Wesley Hospital +1	Wichita	Church	379	10,334	..	..	R	6	(26)	None	31	$75	July
Wichita Hospital 1	Wichita	Church	157	3,487	..	..	R	4	(27)	None	18	$100	July

Abbreviations and other references will be found on page 1321.

Name of Hospital	Location	Control	Capacity	Total Patients Admitted	% Service Cases	% Private Patients Assigned to Interns	Type of Internship	Internships	Affiliated Service	Outpatient Service	Autopsy Percentage	Stipend per Month	Service Commences
KENTUCKY													
St. Elizabeth Hospital [1]	Covington	Church	367	7,540	8	..	R	6	No	None	..	$50	July
Good Samaritan Hospital	Lexington	Church	262	10,085	..	..	R	6	No	None	19	$50	July
St. Joseph Hospital ✦	Lexington	Church	261	7,484	25	91	R	4	No	None	28	$75	July
Kentucky Baptist Hospital	Louisville	Church	196	5,288	5	..	R	3	(28)	None	..	$25	JanJuly
Louisville General Hospital ✦[1,3]	Louisville	Cyc o	638	11,121	100	..	R	18	(29)	Req	29	$20	July
Norton Memorial Infirmary ✦	Louisville	NPAssn	174	5,208	5	90	R	6	No	None	21	$50	July
St. Anthony Hospital [1]	Louisville	Church	176	4,439	..	..	R	3	No	None	28	$75	July
St. Joseph Infirmary ✦	Louisville	Church	325	11,169	5	..	R	8	No	None	22	$50	July
SS. Mary and Elizabeth Hospital	Louisville	Church	220	6,376	..	..	R	4	No	None	19	$75	MarJuly
LOUISIANA													
Charity Hospital of Louisiana ✦[1,3]	New Orleans	State	3,550	34,317	100	..	R	140	No	Req	42	$10	July
Flint Goodridge Hospital of Dillard Univ	New Orleans	NPAssn	120	3,102	12	..	R	4	No	Req	21	$10(b)	AprJuly
Hotel Dieu, Sisters' Hospital ✦[1]	New Orleans	Church	325	11,229	..	100	R	12	No	None	29	$100	July
Mercy Hospital—Soniat Memorial	New Orleans	Church	157	5,182	..	..	R	6	No	None	28	$50	July
Southern Baptist Hospital ✦	New Orleans	Church	444	22,386	5	100	R	17	No	None	17	$30(b)	July
Touro Infirmary ✦	New Orleans	NPAssn	424	13,797	9	100	R	19	No	Req	53	$10	July
United States Marine Hospital ✦[3]	New Orleans	USPHS	572	6,939	100	..	R	12	No	Req	73	$142	JanJuly
Highland Sanitarium [1]	Shreveport	Part	107	3,317	..	100	R	4	No	None	27	$75	JanJuly
North Louisiana Sanitarium [1]	Shreveport	Corp	132	4,816	..	100	R	2	(30)	Req	22	$75	AprJuly
T. E. Schumpert Memorial Sanitarium	Shreveport	Church	127	4,415	..	..	R	1	No	None	..	..	July
Shreveport Charity Hospital ✦[1]	Shreveport	Church	534	16,329	100	..	R	24	No	Op	41	$30	July
Tri-State Hospital	Shreveport	Corp	142	5,084	..	..	R	4	No	None	21	$50	July
MAINE													
Eastern Maine General Hospital [1]	Bangor	NPAssn	243	6,111	37	5	R	4	No	None	20	$50	July
Central Maine General Hospital [1]	Lewiston	NPAssn	200	4,434	..	..	R	6	No	Req	20	$50	July
St. Mary's General Hospital	Lewiston	Church	187	3,741	15	..	R	3	No	Req	29	$70	JanJuly
Maine General Hospital ✦	Portland	NPAssn	385	8,414	55	15	R	9	No	Req	27	..	AprJuly
MARYLAND													
Baltimore City Hospitals ✦[1,3]	Baltimore	City	1,405	5,035	100	..	R&S	45	No	Req	47	$20	July
Bon Secours Hospital ✦	Baltimore	Church	190	3,944	10	100	R	4	No	None	35	..	JanJuly
Church Home and Hospital ✦[1]	Baltimore	Church	193	4,624	11	100	R&S	7	No	Req	61	$25	July
Franklin Square Hospital ✦[1]	Baltimore	NPAssn	270	4,114	14	..	R	6	No	Req	24	$100	July
Hospital for Women ✦[1]	Baltimore	NPAssn	102	3,581	26	100	R	5	No	Req	25	$25	July
Johns Hopkins Hospital ✦[1,3]	Baltimore	NPAssn	1,037	19,964	61	100	S	80	No	Req	58	No	July
Maryland General Hospital ✦[1,3]	Baltimore	Church	268	5,213	..	100	R	9	No	Req	21	$25	July
Mercy Hospital ✦[1]	Baltimore	Church	342	7,502	40	100	R	16	No	Req	27	$25	July
Provident Hospital and Free Dispensary ✦	Baltimore	NPAssn	150	2,697	..	..	R	7	No	Req	..	$15(b)	July
St. Agnes' Hospital ✦[1]	Baltimore	Church	277	6,280	25	100	R	6	No	Req	23	$30	July
St. Joseph's Hospital ✦[1]	Baltimore	Church	200	6,920	23	100	R	8	No	Req	35	$25	July
Sinai Hospital ✦	Baltimore	NPAssn	355	7,264	26	74	R&S	17	No	Req	55	$25	July
South Baltimore General Hospital ✦[1]	Baltimore	NPAssn	106	4,481	43	100	R	5	No	Req	28	$75	JanJuly
Union Memorial Hospital ✦	Baltimore	NPAssn	377	7,790	9	100	R	12	No	Req	30	No	July
United States Marine Hospital ✦[3]	Baltimore	USPHS	500	8,715	100	..	R	12	(31)	Req	72	$142	July
University Hospital ✦[1,3]	Baltimore	State	505	10,179	31	100	R	29	No	Req	43	No	July
West Baltimore General Hospital ✦[1]	Baltimore	NPAssn	192	4,448	17	100	R	8	No	Req	37	$50	July
MASSACHUSETTS													
Beverly Hospital ✦	Beverly	NPAssn	207	4,118	36	64	R	4	No	Req	72	No	July
Beth Israel Hospital ✦	Boston	NPAssn	215	6,072	..	100	S	12	(32)	Req	50	No	July
Boston City Hospital ✦[1,3]	Boston	City	2,537	32,258	100	..	S	125	No	Req	27	No	July
Carney Hospital ✦[1]	Boston	Church	202	5,622	29	99	R	7	No	Op	27	No	July
Children's Hospital ✦[1,3]	Boston	NPAssn	312	6,789	..	..	S	26	No	Req	74	No	July
Faulkner Hospital ✦[1]	Boston	NPAssn	160	3,340	..	..	R	3	No	None	50	No	MarJuly
Massachusetts General Hospital ✦[1,3]	Boston	NPAssn	410	7,532	100	..	S	28	No	Req	67	No	July
Massachusetts Memorial Hospitals ✦[1,3]	Boston	NPAssn	459	7,973	..	100	S	15	No	Req	71	No	AprJuly
New England Hospital for Women and Children ✦[2]	Boston	NPAssn	260	3,993	37	..	R	8	No	Op	33	..	July
Peter Bent Brigham Hospital ✦[3]	Boston	NPAssn	250	4,474	72	10	S	17	No	Req	80	No	July
St. Elizabeth's Hospital ✦	Boston	Church	318	6,335	11	39	R	8	No	Req	19	$25	July
United States Marine Hospital ✦[3]	Boston	USPHS	463	7,204	100	..	R	6	No	Req	49	$142	July
Brockton Hospital	Brockton	NPAssn	146	2,676	22	33	R	4	No	Req	25	$50	July
Cambridge City Hospital	Cambridge	City	400	6,053	58	..	R	11	No	Req	21	$10	JanJuly
Cambridge Hospital ✦[1]	Cambridge	NPAssn	272	6,294	18	..	R	5	No	Req	40	No	July
Chelsea Memorial Hospital	Chelsea	NPAssn	122	2,298	..	..	R	2	No	Req	..	$30	July
Union Hospital [1]	Fall River	NPAssn	201	4,272	11	85	R	3	No	Req	30	$100	JanJuly
Burbank Hospital [1]	Fitchburg	City	256	4,684	31	..	R	4	No	Req	19	$50	AprJuly
Holyoke Hospital	Holyoke	NPAssn	164	3,136	12	..	R	3	No	Req	..	$50	JanJuly
Providence Hospital	Holyoke	Church	200	4,287	4	50	R	4	No	None	15	$50	JanJuly
Lawrence General Hospital	Lawrence	NPAssn	225	4,814	21	..	R	3	No	Req	..	$50	AprJuly
Lowell General Hospital	Lowell	NPAssn	188	3,908	26	..	R	3	No	Req	29	$25	July
St. John's Hospital	Lowell	Church	200	4,703	30	26	R	4	No	Req	17	$30	July
St. Joseph's Hospital	Lowell	Church	170	4,666	42	30	R	3	No	Req	18	$100	AprJuly
Lynn Hospital	Lynn	NPAssn	316	6,743	36	..	R	6	No	Req	15	$30	July
St. Luke's Hospital	New Bedford	NPAssn	339	7,669	20	..	R	6	No	Req	15	$25	JanJuly
Newton-Wellesley Hospital ✦[1]	Newton	NPAssn	304	5,198	35	45	R	6	No	Req	18	No	July
House of Mercy Hospital [1]	Pittsfield	NPAssn	220	4,550	12	..	R	3	No	Req	..	$50	July
St. Luke's Hospital [1]	Pittsfield	Church	200	3,207	8	..	R	2	No	None	45	..	July
Quincy City Hospital ✦[1]	Quincy	City	284	7,289	18	100	R	9	No	Req	70	$75-125	July
Salem Hospital ✦[1,3]	Salem	NPAssn	285	5,940	20	..	R	6	No	Req	38	$30	July
Mercy Hospital	Springfield	Church	375	9,584	20	90	R	6	No	Req	20	$25	July
Springfield Hospital [1]	Springfield	NPAssn	285	6,832	16	20	R	12	(33)	Req	20	No	July
Wesson Memorial Hospital [1]	Springfield	NPAssn	112	3,022	..	..	R	5	(34)	None	19	$30	July
Waltham Hospital	Waltham	NPAssn	185	3,974	13	..	R	4	No	Req	..	$25	July
Memorial Hospital ✦[1,3]	Worcester	NPAssn	215	7,155	..	100	R	10	No	Req	30	$50	July
St. Vincent Hospital	Worcester	Church	275	6,248	18	75	R	6	No	None	18	$50	July
Worcester City Hospital ✦[1,3]	Worcester	City	540	8,850	65	95	R	20	No	Req	21	No	July
Worcester Hahnemann Hospital [1]	Worcester	NPAssn	150	4,746	10	90	R	4	No	None	32	$55	July
MICHIGAN													
St. Joseph's Mercy Hospital ✦	Ann Arbor	Church	306	6,836	..	80	R	6	No	Req	43	$100	July
University Hospital ✦[1,3]	Ann Arbor	State	898	14,671	100	..	R	35	No	Req	56	$20	July
Leila Y. Post Montgomery Hospital	Battle Creek	Church	200	5,845	..	100	R	2	No	Req	40	$100	July
Mercy Hospital [1]	Bay City	Church	162	4,719	..	..	R	3	No	None	..	$100	MarJuly
Charles Godwin Jennings Hospital ✦[1]	Detroit	NPAssn	108	2,613	..	..	R	4	(35)	None	60	$93.75	July

Abbreviations and other references will be found on page 1321.

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Name of Hospital	Location	Control	Capacity	Total Patients Admitted	% Service Cases	% Private Patients Assigned to Interns	Type of Internship	Internships	Affiliated Service	Outpatient Service	Autopsy Percentage	Stipend per Month	Service Commences
MICHIGAN—Continued													
City of Detroit Receiving Hospital +[1]	Detroit	City	647	17,220	100	..	R	40	(36)	Req	40	$100	July
Evangelical Deaconess Hospital [1]	Detroit	Church	225	7,362	..	..	R	3	No	Op	32	$175	July
Grace Hospital +[1,3]	Detroit	NPAssn	513	14,987	94	100	R	38	(37)	Req	39	$80	July
Harper Hospital +[3]	Detroit	NPAssn	985	19,343	7	100	R	36	(38)	Req	40	$80	July
Henry Ford Hospital +[1,3]	Detroit	NPAssn	615	16,544	92	100	R	26	No	Op	62	$150(a)	AprJuly
Mount Carmel Mercy Hospital +	Detroit	Church	556	15,656	2	80	R	12	No	None	25	$100	July
Providence Hospital +	Detroit	Church	446	13,113	10	10	R	20	(39)	Req	61	$125	July
St. Joseph's Mercy Hospital	Detroit	Church	285	7,618	..	35	R	4	No	Req	29	$100	July
St. Mary's Hospital +	Detroit	Church	375	10,256	3	100	R	15	No	Req	60	$75	AprJuly
United States Marine Hospital +[2]	Detroit	USPHS	291	3,630	100	..	R	6	(49)	Req	56	$142	July
Woman's Hospital +[1]	Detroit	NPAssn	352	7,555	..	100	R	7	(41)	Req	58	$80	July
Wayne County General Hospital and Infirmary +[1]	Eloise	County	6,308	5,125	99	..	R	25	(36)	Req	29	$142.50	JanJuly
Hurley Hospital +	Flint	City	484	15,082	..	..	R	12	No	None	23	$100	July
St. Joseph Hospital	Flint	Church	275	6,253	..	..	R	4	No	None	24	....	July
Blodgett Memorial Hospital +[1]	Grand Rapids	NPAssn	210	4,434	15	100	R	6	No	None	25	$75	JanJuly
Butterworth Hospital +[1]	Grand Rapids	NPAssn	286	8,708	..	..	R	9	No	None	45	$30	JanJuly
St. Mary's Hospital +	Grand Rapids	Church	321	7,927	6	100	R	7	No	Req	29	$100	July
Highland Park General Hospital +[1]	Highland Park	City	300	7,778	5	100	R	8	No	Req	33	$100	July
W. A. Foote Memorial Hospital [1]	Jackson	City	185	5,631	..	..	R	4	No	None	17	$100	July
Mercy Hospital [1]	Jackson	Church	150	4,780	..	..	R	3	No	None	..	....	July
Edward W. Sparrow Hospital [1]	Lansing	NPAssn	253	6,826	2	100	R	6	(42)	None	63	....	July
St. Lawrence Hospital	Lansing	Church	270	7,147	..	..	R	8	(42)	None	36	$150	July
Hackley Hospital [1]	Muskegon	NPAssn	170	4,888	..	..	R	4	No	None	35	....	July
Pontiac General Hospital [1]	Pontiac	City	220	6,536	..	100	R	4	No	None	..	$165	July
Saginaw General Hospital	Saginaw	NPAssn	250	5,310	..	100	R	4	No	Req	..	$75	July
St. Mary's Hospital [1]	Saginaw	Church	204	5,822	..	..	R	4	No	None	..	$100	JanJuly
MINNESOTA													
St. Luke's Hospital +	Duluth	NPAssn	270	8,595	..	100	R	7	(43)	Req	75	$25	July
St. Mary's Hospital +	Duluth	Church	300	9,622	..	100	R	10	(43)	Req	85	$25	July
Asbury Hospital [1]	Minneapolis	Church	165	5,302	..	100	R	4	No	None	36	$30	July
Minneapolis General Hospital +[1,3]	Minneapolis	City	629	8,080	100	..	R	24	(44)	Req	56	$25	JanJuly
Northwestern Hospital	Minneapolis	NPAssn	292	7,981	..	..	R	4	No	None	44	$50	July
St. Barnabas Hospital +[1]	Minneapolis	NPAssn	244	7,208	..	..	R	4	No	None	62	$100	July
St. Mary's Hospital +[1]	Minneapolis	Church	365	13,002	..	100	R	10	No	None	29	$50	JanJuly
Swedish Hospital [1]	Minneapolis	NPAssn	372	10,955	..	..	R	4	No	None	29	$30	AprJuly
University Hospitals +[1,3]	Minneapolis	State	475	8,697	100	..	S	28	No	Req	67	No	AprJuly
Ancker Hospital +[3]	St. Paul	CyCo	905	6,387	100	..	R	24	No	Req	73	$30	July
Bethesda Hospital [1]	St. Paul	Church	198	6,350	..	100	R	5	(45)	Req	38	$100	July
Charles T. Miller Hospital +[1]	St. Paul	NPAssn	325	9,855	15	95	R	7	(46)	Req	68	$30	July
St. Joseph's Hospital	St. Paul	Church	213	11,314	..	..	R	7	(45)	None	45	$60	July
MISSOURI													
St. Louis County Hospital +	Clayton	County	210	2,805	98	2	R	6	No	Req	33	$10	July
Kansas City General Hospital +[3]	Kansas City	City	540	8,077	100	..	R	28	(47)	Req	49	$25	July
Kansas City General Hospital No. 2 [1,3]	Kansas City	City	276	3,302	100	..	R	12	No	Req	30	$25	July
Menorah Hospital [1]	Kansas City	NPAssn	160	4,185	..	..	R	7	No	None	29	$75(b)	July
Research Hospital +[1]	Kansas City	NPAssn	251	6,578	..	100	R	8	No	None	56	$50	July
St. Joseph's Hospital +	Kansas City	Church	296	9,561	10	100	R	8	No	None	56	$50	July
St. Luke's Hospital +	Kansas City	Church	286	7,198	..	..	R	7	No	None	61	$50	July
St. Mary's Hospital +[1]	Kansas City	Church	182	5,862	..	..	R	5	No	None	56	$40	AprJuly
Trinity Lutheran Hospital	Kansas City	Church	150	3,707	..	..	R	4	No	None	29	$100	July
Missouri Methodist Hospital [1]	St. Joseph	Church	225	5,992	..	98	R	5	No	None	17	$100	July
St. Joseph's Hospital [1]	St. Joseph	Church	150	3,623	10	50	R	2	No	None	21	$100	AprJuly
Barnes Hospital +[1,3]	St. Louis	Church	585	14,473	50	100	S	26	(48)	Req	67	$10	July
Christian Hospital +	St. Louis	NPAssn	155	5,036	..	..	R	3	No	None	40	$40(b)	JanJuly
De Paul Hospital +	St. Louis	Church	324	7,490	25	100	R	9	No	Req	23	$25	July
Evangelical Deaconess Hospital [1]	St. Louis	Church	265	5,716	..	..	R	9	No	None	19	$25(b)	July
Homer G. Phillips Hospital +[1,3]	St. Louis	City	777	10,189	100	..	R	36	(49)	Req	24	$25	July
Jewish Hospital +[1]	St. Louis	NPAssn	330	7,258	8	100	R	12	No	Req	30	$35	July
Lutheran Hospital	St. Louis	Church	188	5,958	4	100	R	6	No	None	25	$40(b)	July
Missouri Baptist Hospital +	St. Louis	Church	500	10,796	..	100	R	8	No	None	..	$35(b)	July
St. Anthony's Hospital +	St. Louis	Church	271	6,422	7	100	R	8	No	None	38	$25	July
St. John's Hospital +	St. Louis	Church	370	8,104	2	100	R	12	No	Req	20	$25	July
St. Louis City Hospital +[1,3]	St. Louis	City	1,104	15,408	100	..	R	72	No	Req	50	$35	July
St. Luke's Hospital +	St. Louis	Church	220	4,712	7	100	R	8	No	Req	39	$25(b)	July
St. Mary's Group of Hospitals +	St. Louis	Church	751	12,740	8	99	R	26	(50)	Req	45	$15	July
St. Mary's Infirmary	St. Louis	Church	179	4,769	21	54	R	3	No	None	23	$10(b)	July
MONTANA													
Murray Hospital	Butte	Corp	120	2,431	..	100	R	4	No	Req	37	$108(b)	July
St. James Hospital [1]	Butte	Church	190	3,663	25	25	R	3	No	Req	24	$100	AprJuly
NEBRASKA													
Bryan Memorial Hospital [1,3]	Lincoln	Church	134	2,781	..	75	R	2	No	None	51	$100	July
Lincoln General Hospital [1,3]	Lincoln	NPAssn	223	5,649	..	100	R	4	No	None	44	$30	JanJuly
St. Elizabeth Hospital	Lincoln	Church	230	6,252	..	..	R	4	No	None	23	$75	July
Bishop Clarkson Memorial Hospital +	Omaha	Church	162	5,123	..	..	R	4	No	None	42	$100	July
Creighton Memorial St. Joseph's Hosp. +[1,3]	Omaha	Church	514	12,145	10	95	R	12	No	Req	43	$25	July
Immanuel Deaconess Institute	Omaha	Church	155	4,204	..	100	R	4	No	None	28	$50	July
Nebraska Methodist Hospital +	Omaha	Church	189	5,432	..	100	R	4	No	None	47	$30	July
St. Catherine's Hospital	Omaha	Church	201	5,306	..	99	R	4	No	None	24	$100	July
University of Nebraska Hospital +	Omaha	State	230	2,681	100	..	R	12	No	Req	98	$25	July
NEW HAMPSHIRE													
Mary Hitchcock Memorial Hospital +	Hanover	NPAssn	196	4,502	34	100	R	8	No	None	87	$8.33	July
NEW JERSEY													
Atlantic City Hospital +	Atlantic City	NPAssn	300	6,125	..	100	R	8	No	Req	21	$50	July
Bayonne Hospital and Dispensary +[1]	Bayonne	NPAssn	280	5,077	48	100	R	6	No	Req	27	$75	July
Cooper Hospital +	Camden	NPAssn	447	8,702	55	100	R	10	No	Req	49	$15	July
West Jersey Homeopathic Hospital +[1]	Camden	NPAssn	325	5,110	45	..	R	8	No	Req	34	$125	July
East Orange General Hospital	East Orange	NPAssn	150	2,887	50	..	R	4	No	Req	25	$50	July
Alexian Brothers Hospital (c)	Elizabeth	Church	168	2,714	..	..	R	4	(51)	Req	16	$100(b)	July
Elizabeth General Hospital and Dispensary [1]	Elizabeth	NPAssn	237	4,751	40	100	R	10	No	Req	22	$50	JanJuly

Abbreviations and other reference s will be found on page 1321.

Name of Hospital	Location	Control	Capacity	Total Patients Admitted	% Service Cases	% Private Patients Assigned to Interns	Type of Internship	Internships	Affiliated Service	Outpatient Service	Autopsy Percentage	Stipend per Month	Service Commences
NEW JERSEY—Continued													
St. Elizabeth Hospital	Elizabeth	Church	260	4,119	25	..	R	8	No	Req	18	$75	July
Englewood Hospital [1,3]	Englewood	NPAssn	238	5,032	31	..	R	9	No	Req	18	$50	JanJuly
Hackensack Hospital +[1]	Hackensack	NPAssn	300	9,360	27	75	R	10	No	Req	17	$50	JanJuly
St. Mary's Hospital [1]	Hoboken	Church	450	5,830	65	..	R	11	No	Req	17	$50	JanJuly
Christ Hospital	Jersey City	Church	285	5,685	40	..	R	14	No	Req	17	$100	JanJuly
Jersey City Hospital +[1,3]	Jersey City	City	960	18,865	80	100	R	80	(52)	Req	23	$25	July
St. Francis Hospital [1]	Jersey City	Church	228	4,230	72	25	R	7	(53)	Req	15	$65	JanJuly
Monmouth Memorial Hospital +[1,3]	Long Branch	NPAssn	206	7,088	..	..	R	9	No	Op	36	$50	July
Mountainside Hospital +[1,3]	Montclair	NPAssn	368	5,344	24	50	R	12	No	Req	25	$25	JanJuly
All Souls Hospital	Morristown	Church	163	2,653	14	85	R	3	No	Req	15	..	July
Morristown Memorial Hospital [1]	Morristown	NPAssn	156	2,920	40	50	R	5	No	Req	..	$75	July
Burlington County Hospital +[1]	Mount Holly	NPAssn	145	2,092	30	100	R	4	(54)	Req	36	$50	July
Fitkin Memorial Hospital [1]	Neptune	NPAssn	180	4,622	31	100	R	9	No	Req	35	$50(b)	July
Hospital of St. Barnabas and for Women and Children +[1]	Newark	Church	270	5,921	36	20	R	7	No	Req	32	$104.65(a)	July
Lutheran Memorial Hospital	Newark	NPAssn	130	2,963	11	..	R	4	No	Req	16	$25	July
Newark Beth Israel Hospital +[1,3]	Newark	NPAssn	441	10,733	20	100	R	18	No	Req	32	$25	July
Newark City Hospital +[1,3]	Newark	City	740	10,843	100	..	R	24	No	Req	16	..	July
St. James Hospital	Newark	Church	160	3,063	65	35	R	3	No	Req	30	$175	July
St. Michael's Hospital +	Newark	Church	420	7,629	..	100	R	8	No	Req	26	$75	JanJuly
St. Peter's General Hospital	New Brunswick	Church	242	5,614	13	..	R	5	No	Req	17	$75	July
Orange Memorial Hospital	Orange	NPAssn	439	8,079	23	..	R	8	No	Req	26	$35	July
St. Mary's Hospital [1]	Orange	Church	160	2,976	4	..	R	2	No	Req	..	$75	JanJuly
Passaic General Hospital [1]	Passaic	NPAssn	290	5,731	22	15	R	4	No	Req	17	$50	July
St. Mary's Hospital [1]	Passaic	Church	240	6,233	25	50	R	4	No	Req	21	$50	July
Nathan and Miriam Barnert Mem. Hosp. [1]	Paterson	NPAssn	145	3,561	34	10	R	5	No	Req	..	$50	July
Paterson General Hospital +	Paterson	NPAssn	468	7,365	31	..	R	10	No	Op	23	$50(b)	July
St. Joseph Hospital	Paterson	Church	468	7,636	35	20	R	10	No	Req	24	$75	July
Perth Amboy General Hospital [1]	Perth Amboy	NPAssn	197	3,405	43	..	R	5	No	None	36	$50	JulyDec
Muhlenberg Hospital [2]	Plainfield	NPAssn	330	7,164	19	100	R	8	No	Req	20	$50	JanJuly
Holy Name Hospital [1]	Teaneck	Church	235	4,952	40	100	R	8	No	Req	26	$75	MayJuly
Mercer Hospital [1]	Trenton	NPAssn	284	6,036	25	75	R	7	No	Req	28	$75	JulyOct
St. Francis Hospital	Trenton	Church	350	5,918	42	100	R	8	No	Req	21	$75	July
William McKinley Memorial Hospital [1]	Trenton	NPAssn	154	3,076	28	90	R	4	No	Req	..	$75	JanJuly
North Hudson Hospital [1,3]	Weehawken	NPAssn	191	2,663	50	100	R	7	(52)	Req	19	$75	JanJuly
NEW YORK													
Albany Hospital +[1,3]	Albany	NPAssn	571	13,116	25	100	R	27	No	Req	57	No	July
Memorial Hospital [1]	Albany	NPAssn	146	3,262	12	100	R	6	No	Req	18	$75	July
St. Peter's Hospital	Albany	Church	159	4,955	6	..	R	5	(55)	Req	21	$75	July
Binghamton City Hospital +[1,3]	Binghamton	City	530	8,970	20	60	R	12	No	Req	24	$50	July
Beth-El Hospital +	Brooklyn	NPAssn	332	7,124	41	75	R	18	No	Req	24	$50	July
Beth Moses Hospital +[1,3]	Brooklyn	NPAssn	215	4,432	29	100	R	18	No	Op	18	$75	July
Brooklyn Hospital +[1]	Brooklyn	NPAssn	374	7,779	49	100	R	16	No	Op	31	No	July
Bushwick Hospital	Brooklyn	NPAssn	125	2,816	..	100	R	4	No	Req	17	..	July
Coney Island Hospital +[1,3]	Brooklyn	City	300	4,864	100	..	R	22	No	Req	18	$45	July
Cumberland Hospital +[1,3]	Brooklyn	City	400	5,729	100	..	R	24	No	Req	42	$45	July
Greenpoint Hospital +[1,3]	Brooklyn	City	300	4,819	100	..	R	8	No	Req	21	$45	July
Israel Zion Hospital +[1,3]	Brooklyn	NPAssn	507	10,707	..	75	R	12	No	Req	43	$35	July
Jewish Hospital +[1,2]	Brooklyn	NPAssn	661	13,038	34	100	R&S	40	(56)	Req	35	$10(b)	July
Kings County Hospital +[1,3]	Brooklyn	City	2,400	49,463	100	..	R&S	127	No	Req	16	$45	July
Long Island College Hospital +	Brooklyn	NPAssn	449	8,424	35	..	R&S	22	No	Req	39	No	July
Methodist Hospital +	Brooklyn	Church	539	8,949	42	100	R	14	No	Req	..	No	July
Norwegian Lutheran Deaconess' Home and Hospital +[1]	Brooklyn	Church	263	4,639	47	..	R	5	No	Req	..	$25	July
St. Catherine's Hospital	Brooklyn	Church	344	6,310	32	100	R	16	No	Req	20	$20(b)	July
St. John's Hospital +	Brooklyn	Church	250	4,278	46	100	R	6	No	Req	20	$25	July
St. Mary's Hospital +	Brooklyn	Church	316	5,386	28	45	R	16	No	Req	22	$30	July
St. Peter's Hospital	Brooklyn	Church	227	2,745	..	..	R	6	No	Op	..	$75	July
Unity Hospital	Brooklyn	NPAssn	283	5,389	16	100	R	12	No	Req	19	$50	July
Wyckoff Heights Hospital [1]	Brooklyn	NPAssn	197	4,530	25	100	R	9	No	Req	..	$50	July
Buffalo General Hospital +[1,3]	Buffalo	NPAssn	500	11,741	41	100	R	17	(57)	Req	46	No	July
Buffalo Hospital of the Sisters of Charity	Buffalo	Church	194	6,077	4	96	R	14	(58)	Req	30	$55	July
Deaconess Hospital +	Buffalo	NPAssn	344	7,010	..	..	R	4	No	Req	33	$50	July
Edward J. Meyer Memorial Hospital +[1,3]	Buffalo	City	1,169	9,065	100	..	R	18	No	Req	39	$50(a)	July
Mercy Hospital	Buffalo	Church	258	6,297	..	100	R	6	No	Req	17	$65	July
Millard Fillmore Hospital +	Buffalo	NPAssn	444	13,091	1	100	R	10	(59)	Req	27	$15(b)	July
Mary Imogene Bassett Hospital +[1]	Cooperstown	NPAssn	109	1,871	..	..	R	8	No	None	63	$50	July
Arnot-Ogden Memorial Hospital	Elmira	NPAssn	236	6,230	9	60	R	5	(60)	None	29	$40	July
St. Joseph's Hospital [1]	Elmira	Church	280	5,470	30	..	R	5	No	None	..	$75(b)	July
Ideal Hospital [1]	Endicott	NPAssn	126	2,350	1	100	R	3	No	None	20	$80	July
Flushing Hospital [1,3]	Flushing	NPAssn	321	7,419	23	..	R	8	No	Op	19	$100	July
Meadowbrook Hospital +[1]	Hempstead	County	274	4,504	99	100	R	12	No	Req	47	$28.75	JanJuly
Jamaica Hospital [1]	Jamaica	NPAssn	227	5,563	24	..	R	8	No	Req	38	$55	July
Mary Immaculate Hospital +	Jamaica	Church	336	7,513	..	..	R	16	No	Req	22	$35	July
Queens General Hospital +[1,3]	Jamaica	City	757	10,657	100	..	R	35	No	Req	44	$45	JanJuly
Charles S. Wilson Memorial Hospital +[1,3]	Johnson City	NPAssn	350	7,098	..	100	R	10	No	Req	27	$100(b)	July
Our Lady of Victory Hospital	Lackawanna	Church	180	4,499	5	100	R	4	(61)	Req	30	$75	JanJuly
St. John's Long Island City Hospital [2]	Long Island City	Church	284	5,505	47	..	R	16	No	Req	31	$50	July
Nassau Hospital [1]	Mineola	NPAssn	276	6,217	..	..	R	6	No	None	20	$50	AprJuly
Mount Vernon Hospital [1]	Mount Vernon	NPAssn	254	5,412	21	..	R	6	No	Req	29	$75	JanJuly
New Rochelle Hospital +[1,3]	New Rochelle	NPAssn	309	7,244	33	100	R	12	No	Req	40	$50	July
Bellevue Hospital +	New York	City	3,325	60,163	100	..	(Apply to divisions listed below)						
Division I Columbia University +[1]			226	5,225	100	..	M&S	13	No	Req	20	$45	July
Division II Cornell University +[1]			205	5,498	100	..	M&S	15	No	Req	20	$45	July
Division III New York University +[1]			374	11,172	100	..	M&S	58	No	Req	20	$45	July
Division IV Open Division +[1,3]			307	4,846	100	..	M&S	15	No	Req	20	$45	July
Beth David Hospital	New York	NPAssn	190	4,413	..	100	R	12	No	Op	25	$50	July
Beth Israel Hospital +[1,3]	New York	NPAssn	412	7,551	32	100	R	27	No	Op	29	$25	July
Bronx Hospital +[1,3]	New York	NPAssn	382	7,746	27	50	R	15	No	Req	29	$35	July
Columbus Hospital	New York	Church	300	5,577	..	100	R	8	No	Op	21	$50	July
Flower and Fifth Avenue Hospitals +[1,3]	New York	NPAssn	419	9,574	29	100	R	22	No	Req	32	No	July
Fordham Hospital +[1,3]	New York	City	539	9,302	100	..	R	18	No	Req	19	$45	July
French Hospital +[1]	New York	NPAssn	313	5,869	30	98	R	15	No	Op	31	$20	July
Goldwater Memorial Hospital +[1,3]	New York	City	1,000	1,505	100	..	M	14	No	Req	38	$25	July
Gouverneur Hospital +[1,3]	New York	City	220	2,852	100	..	R	21	(62)	Req	16	$45	July
Harlem Hospital +[1,3]	New York	City	763	16,512	100	..	R	52	No	Req	15	$45	July
Hospital for Joint Diseases +[1,3]	New York	NPAssn	362	5,017	38	100	R	12	(63)	Req	22	$25	July
Jewish Memorial Hospital [3]	New York	NPAssn	219	5,158	40	100	R	14	No	Op	34	$50	July

Abbreviations and other references will be found on page 1321.

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Name of Hospital	Location	Control	Capacity	Total Patients Admitted	% Service Cases	% Private Patients Assigned to Interns	Type of Internship	Internships	Affiliated Service	Outpatient Service	Autopsy Percentage	Stipend per Month	Service Commences
NEW YORK—Continued													
Knickerbocker Hospital +[3]	New York	NPAssn	178	3,959	61	90	R	12	(64)	Req	28	$50	July
Lenox Hill Hospital +[1,3]	New York	NPAssn	620	11,140	46	30	R	19	No	Req	39	(b)	July
Lincoln Hospital +[1,3]	New York	City	469	9,889	100	..	R	35	No	Op	27	$25(b)	JanJuly
Memorial Hospital +[1,3]	New York	NPAssn	213	5,314	43	..	R	9	(65)	Op	36	...	July
Metropolitan Hospital +[1,3]	New York	City	1,183	9,423	100	..	R	40	No	Req	19	$45	July
Misericordia Hospital [1]	New York	Church	236	4,049	20	..	R	8	No	Req	..	$30	JanJuly
Montefiore Hosp. for Chronic Diseases +[1,3]	New York	NPAssn	754	1,781	77	100	M&S	11	No	Req	53	$25	July
Morrisania City Hospital +[3]	New York	City	311	10,193	100	..	R	18	No	Req	16	$35	July
Mother Cabrini Memorial Hospital	New York	Church	205	2,757	48	52	R	8	No	Req	20	...	July
Mount Sinai Hospital +[1,3]	New York	NPAssn	853	14,291	61	15	M	35	No	Op	63	(b)	July
New York City Hospital +[1,3]	New York	City	880	6,895	100	..	R	38	No	Op	40	$45	JanJuly
New York Hospital +[1,3]	New York	NPAssn	1,008	17,623	..	..	S	36	No	Req	57	No	July
New York Infirmary for Women and Children +[2,3]	New York	NPAssn	161	2,402	43	65	R	7	No	Req	46	$20	JanJuly
New York Polyclinic Medical School and Hospital +[3]	New York	NPAssn	411	8,526	..	100	R	8	No	Req	17	(b)	JanJuly
New York Post-Graduate Medical School and Hospital +[1,3]	New York	NPAssn	410	8,616	28	100	S	10	No	Req	48	No	July
Presbyterian Hospital +[1,3]	New York	NPAssn	1,406	26,367	58	..	M&S	26	No	Req	52	No	July
Roosevelt Hospital +[1,3]	New York	NPAssn	377	7,435	61	..	S	12	No	Req	32	No	July
St. Clare's Hospital +[1,3]	New York	Church	400	7,406	28	50	R	12	No	Req	31	$10	July
St. Francis Hospital [1]	New York	Church	430	6,120	30	70	R	8	No	None	..	$25	JanJuly
St. Luke's Hospital +[3]	New York	NPAssn	508	8,166	59	100	M	16	No	Req	33	No	July
St. Vincent's Hospital +[1]	New York	Church	647	12,434	51	49	R	24	No	Req	33	No	JanJuly
Sydenham Hospital +[1,3]	New York	NPAssn	252	4,918	50	100	R	20	No	Op	21	$50	JanJuly
United Hospital	Port Chester	NPAssn	222	5,934	31	99	R	6	No	Req	29	$100	July
Vassar Brothers Hospital	Poughkeepsie	NPAssn	250	6,200	32	..	R	5	No	Op	30	$100	JanJuly
Genesee Hospital +[1]	Rochester	NPAssn	262	6,328	17	100	R	11	No	Req	48	$25	July
Highland Hospital +[3]	Rochester	NPAssn	255	5,217	10	75	R	12	No	Req	46	$25	July
Rochester General Hospital +[3]	Rochester	NPAssn	387	9,761	23	75	R	16	No	Req	75	...	July
St. Mary's Hospital +[1]	Rochester	Church	390	9,196	12	100	R	10	No	Op	40	$40	July
Strong Memorial and Rochester Municipal Hospitals +[1,3]	Rochester	NP-Cy	733	13,845	54	100	M&S	39	No	Req	73	No	July
Rockaway Beach Hospital	Rockaway Beach	NPAssn	125	2,690	45	100	R	8	No	None	46	$100	July
Ellis Hospital +[1]	Schenectady	NPAssn	470	14,657	..	..	R	12	No	Req	22	$60	July
U. S. Marine Hospital +[3] (Staten Island)	Stapleton	USPHS	1,223	18,929	100	..	R	33	(66)	Req	58	$131.06	July
St. Vincent's Hospital +	Staten Island	Church	238	5,920	40	100	R	8	No	Req	17	$50	July
Staten Island Hospital [1]	Staten Island	NPAssn	300	5,303	..	..	R	8	No	Req	30	$100	OctJuly
Crouse-Irving Hospital +[1]	Syracuse	NPAssn	255	7,172	29	10	R	6	No	None	18	$25	July
General Hospital +[1]	Syracuse	NPAssn	170	3,822	9	..	R	4	No	Req	26	$25	July
Hospital of the Good Shepherd +[1]	Syracuse	NPAssn	195	4,660	28	..	R	24	(67)	None	42	No	July
St. Joseph Hospital	Syracuse	Church	235	5,662	21	95	R	6	No	None	18	$35	July
Syracuse Memorial Hospital +[1]	Syracuse	NPAssn	330	9,152	34	50	R	(67)	(67)	None	37	No	July
Samaritan Hospital +[1]	Troy	NPAssn	202	4,600	13	100	R	4	No	Req	48	$50	AprJuly
Grasslands Hospital +[1,3]	Valhalla	County	823	3,547	100	..	R	24	No	Req	53	$25	July
St. Agnes Hospital	White Plains	Church	177	2,757	..	100	R	5	No	Req	29	$80	July
White Plains Hospital [1,3]	White Plains	NPAssn	202	5,085	..	100	R	6	No	Req	25	$25(b)	JanJuly
St. John's Riverside Hospital	Yonkers	NPAssn	220	4,629	..	..	R	4	No	Op	23	$50	July
St. Joseph's Hospital	Yonkers	Church	197	2,784	100	100	R	4	No	Req	18	$75	JanJuly
Yonkers General Hospital [1]	Yonkers	NPAssn	160	4,626	15	20	R	4	No	Req	19	$125	OctJuly
NORTH CAROLINA													
Charlotte Memorial Hospital +[1,3]	Charlotte	NPAssn	500	9,025	20	100	R	8	(68)	Req	48	$40	July
Duke Hospital +[1,3]	Durham	NPAssn	604	12,885	50	100	R&S	52	(69)	Req	60	No	July
Lincoln Hospital	Durham	NPAssn	122	2,182	50	50	R	4	No	Req	..	$25	July
Watts Hospital +	Durham	NPAssn	225	7,482	13	100	R	7	No	Req	31	$50	July
Rex Hospital +[1]	Raleigh	NPAssn	326	8,240	10	95	R	4	No	Req	22	$100	JanJuly
St. Agnes Hospital [1]	Raleigh	Church	118	2,009	..	100	R	4	No	Req	..	$25	July
James Walker Memorial Hospital	Wilmington	NPAssn	331	8,636	5	..	R	8	No	Req	20	$75	Jan
City Hospital +[3]	Winston-Salem	City	440	9,429	20	100	R	15	No	Req	25	$25	July
North Carolina Baptist Hospital +[1,3]	Winston-Salem	Church	320	6,468	50	100	M&S	19	No	Req	57	No	July
NORTH DAKOTA													
Trinity Hospital +[1]	Minot	Church	220	6,661	..	..	R	2	No	None	72	...	July
OHIO													
City Hospital +	Akron	NPAssn	473	12,501	7	..	R	15	(70)	Req	26	$30(b)	July
Peoples Hospital +[1]	Akron	NPAssn	260	7,248	12	100	R	6	(70)	Req	47	$50	July
St. Thomas Hospital +	Akron	Church	235	7,129	..	..	R	4	No	Req	33	$75	JanJuly
Aultman Hospital +[1]	Canton	NPAssn	302	7,776	3	80	R	9	No	None	24	$50	July
Mercy Hospital +	Canton	Church	265	8,080	..	100	R	6	No	None	20	$75	July
Bethesda Hospital +[3]	Cincinnati	Church	262	9,130	25	100	R	5	(71)	Req	32	$75	July
Christ Hospital +	Cincinnati	Church	586	10,461	15	95	R	13	(71)	Req	37	$30	July
Cincinnati General Hospital +[1,3]	Cincinnati	City	965	18,838	100	..	R	40	No	Req	41	No	July
Deaconess Hospital +[1]	Cincinnati	Church	198	4,443	15	100	R	4	(72)	Req	31	$75(b)	AprJuly
Good Samaritan Hospital +	Cincinnati	Church	664	15,934	30	95	R	14	No	Req	21	$60	JanJuly
Jewish Hospital +[1]	Cincinnati	NPAssn	300	7,841	3	100	R	10	(72)	Req	34	$65	July
St. Mary's Hospital [1,3]	Cincinnati	Church	230	4,922	31	34	R	6	No	None	..	$75	July
City Hospital +[1,3]	Cleveland	City	1,642	11,259	100	..	R	36	No	Req	35	$25	July
Fairview Park Hospital +	Cleveland	Church	201	6,735	4	100	R	4	No	Req	26	$50	JanJuly
Lutheran Hospital +[1]	Cleveland	Church	160	4,926	3	98	R	8	No	None	40	$75	JanJuly
Mount Sinai Hospital +[3]	Cleveland	NPAssn	270	7,561	11	100	R	12	No	Op	34	$50	July
St. Alexis Hospital +	Cleveland	Church	259	7,768	13	100	R	8	No	Req	38	$50	JanJuly
St. John's Hospital +	Cleveland	Church	275	7,997	10	100	R	7	No	None	26	$50	July
St. Luke's Hospital +[1,3]	Cleveland	Church	376	10,536	13	87	R	20	No	Req	46	$25	July
St. Vincent Charity Hospital +	Cleveland	Church	290	7,315	11	..	R	12	(73)	Req	24	$50	July
University Hospitals +[1,3]	Cleveland	NPAssn	749	17,812	38	100	S	40	No	Req	54	$20	July
Grant Hospital [1]	Columbus	NPAssn	313	9,030	10	..	R	6	No	None	21	$75	July
Mount Carmel Hospital +	Columbus	Church	300	8,326	1	100	R	8	(74)	None	38	$50	July
St. Francis Hospital +	Columbus	State	160	3,415	..	100	R	9	(75)	None	23	$20	July
Starling-Loving University Hospital +[1]	Columbus	State	314	8,246	..	100	R	12	(74)	Op	40	$0	July
White Cross Hospital +	Columbus	Church	352	9,619	10	85	R	8	No	None	38	$50	July
Good Samaritan Hospital [1]	Dayton	Church	375	9,980	5	90	R	4	No	None	16	$50	AprJuly
Miami Valley Hospital +[3]	Dayton	NPAssn	520	10,784	14	..	R	12	No	Req	37	$50	July
St. Elizabeth Hospital	Dayton	Church	375	9,126	20	..	R	6	No	None	22	$50	July
Huron Road Hospital +[1]	East Cleveland	NPAssn	352	12,859	3	100	R	13	No	Req	78	$20(b)	July
Mercy Hospital [1]	Hamilton	Church	200	6,647	..	..	R	4	No	Req	28	$100	July
Lakewood Hospital	Lakewood	City	157	4,677	100	..	R	4	No	Req	16	$25	July

Abbreviations and other references will be found on page 1321.

Name of Hospital	Location	Control	Capacity	Total Patients Admitted	% Service Cases	% Private Patients Assigned to Interns	Type of Internship	Internships	Affiliated Service	Outpatient Service	Autopsy Percentage	Stipend per Month	Service Commences
OHIO—Continued													
Lima Memorial Hospital	Lima	NPAssn	182	5,089	8	75	R	4	No	Req	29	$75	July
St. Rita's Hospital [1]	Lima	Church	185	5,002	6	16	R	3	No	Req	32	$100	July
Springfield City Hospital [1]	Springfield	City	332	7,166	3	50	R	8	No	Req	21	$100	JanJuly
Flower Hospital	Toledo	Church	172	4,723	..	..	R	4	No	None	20	$100	JanJuly
Maumee Valley Hospital ✦	Toledo	County	325	2,855	100	..	R	12	No	Req	22	$75	JanJuly
Mercy Hospital ✦	Toledo	Church	320	9,261	10	45	R	7	No	None	16	$100	July
Riverside Hospital [1]	Toledo	NPAssn	198	4,316	5	100	R	4	No	None	18	$75	July
St. Vincent's Hospital ✦[1]	Toledo	Church	395	11,018	9	100	R	7	No	Req	22	$50	July
Toledo Hospital ✦[1]	Toledo	NPAssn	320	8,088	3	70	R	12	No	Req	61	$75	July
St. Elizabeth Hospital ✦[1]	Youngstown	Church	340	10,652	4	..	R	10	No	Req	23	$75	July
Youngstown Hospital ✦[2]	Youngstown	NPAssn	622	17,297	4	100	R	16	No	Req	16	$25(b)	JanJuly
OKLAHOMA													
St. Anthony Hospital ✦	Oklahoma City	Church	450	11,056	9	92	R	10	No	None	25	$50	July
University Hospitals ✦[1,2]	Oklahoma City	State	425	6,068	99	..	R	21	(76)	Req	30	$35	July
Wesley Hospital	Oklahoma City	Part	183	6,062	10	80	R	3	No	Req	22	$50	July
Hillcrest Memorial Hospital [1]	Tulsa	NPAssn	418	8,903	..	..	R	4	No	None	18	$50(b)	July
St. John's Hospital	Tulsa	Church	333	9,063	33	..	R	8	No	None	16	...	JanJuly
OREGON													
Emanuel Hospital ✦[1]	Portland	Church	425	11,563	..	100	R	15	(77)	None	56	$50	JanJuly
Good Samaritan Hospital ✦	Portland	Church	505	13,595	10	50	R	14	No	None	51	$50	July
Portland Sanitarium and Hospital	Portland	Church	202	6,393	..	100	R	5	No	None	31	$100	July
Providence Hospital	Portland	Church	210	6,718	..	..	R	6	(78)	None	29	$50	July
St. Vincent's Hospital ✦	Portland	Church	430	15,765	..	..	R	15	(79)	None	38	$50	July
University of Oregon Medical School Hospitals and Clinics ✦[1]	Portland	CoState	453	6,400	81	100	R	18	(80)	Op	45	$50	July
PENNSYLVANIA													
Abington Memorial Hospital ✦[2]	Abington	NPAssn	340	7,354	41	98	R	7	No	Req	37	No	JanJuly
Allentown Hospital ✦[1,2]	Allentown	NPAssn	375	8,867	55	45	R	10	No	Req	31	$50	July
Sacred Heart Hospital ✦[1]	Allentown	Church	335	6,545	..	99	R	8	No	Req	34	$75	July
Altoona Hospital	Altoona	NPAssn	205	4,961	..	100	R	5	No	Req	25	$50	July
Mercy Hospital [1]	Altoona	NPAssn	180	4,283	..	..	R	5	No	Op	..	$110	July
St. Luke's Hospital ✦[2]	Bethlehem	NPAssn	293	7,192	15	99	R	9	No	Req	35	$30	July
Braddock General Hospital [1]	Braddock	NPAssn	217	4,311	8	100	R	4	No	Req	19	$50	July
Bryn Mawr Hospital ✦[2]	Bryn Mawr	NPAssn	333	6,353	23	100	R	9	No	Req	41	No	July
Chester Hospital [1,2]	Chester	NPAssn	280	7,071	13	..	R	8	No	Req	26	$75	JanJuly
George F. Geisinger Memorial Hospital ✦[1]	Danville	NPAssn	224	6,122	..	100	R	10	No	Req	32	$20	July
Fitzgerald-Mercy Hospital	Darby	Church	260	5,224	23	100	R	8	No	Req	88	$50	July
Easton Hospital [1,2]	Easton	NPAssn	210	4,368	25	5	R	6	No	Req	18	$100	July
Hamot Hospital ✦[1]	Erie	NPAssn	255	7,138	14	68	R	8	No	Req	21	$50	July
St. Vincent's Hospital ✦	Erie	NPAssn	340	9,026	20	..	R	8	No	Req	17	$75	JanJuly
Westmoreland Hospital	Greensburg	NPAssn	230	5,839	..	..	R	4	No	None	24	...	July
Harrisburg Hospital [1]	Harrisburg	NPAssn	368	8,078	18	75	R	10	No	Req	27	$75	JanJuly
Harrisburg Polyclinic Hospital [1]	Harrisburg	NPAssn	209	5,310	..	99	R	5	No	Req	16	$100	JanJuly
Conemaugh Valley Memorial Hospital [1]	Johnstown	NPAssn	410	7,154	29	100	R	8	No	None	..	$75	July
Nesbitt Memorial Hospital [1,2]	Kingston	NPAssn	169	4,175	20	50	R	4	No	Req	26	$50	July
Lancaster General Hospital [1]	Lancaster	NPAssn	301	6,580	20	75	R	8	No	Req	55	$50(b)	July
St. Joseph's Hospital ✦	Lancaster	Church	260	5,319	28	..	R	6	No	Req	29	$100	July
McKeesport Hospital	McKeesport	NPAssn	325	6,959	12	100	R	7	No	Req	18	$100	July
Montgomery Hospital [1]	Norristown	NPAssn	164	3,926	..	100	R	4	No	Req	..	$100	JanJuly
Chestnut Hill Hospital [1]	Philadelphia	NPAssn	142	2,863	..	..	R	4	No	Req	27	$50	July
Frankford Hospital [1]	Philadelphia	NPAssn	192	3,799	..	100	R	7	No	Req	..	$75	JanJuly
Germantown Dispensary and Hospital ✦[2]	Philadelphia	NPAssn	410	6,357	40	100	R	12	No	Req	44	No	JanJuly
Graduate Hospital of the University of Pennsylvania ✦[2]	Philadelphia	NPAssn	461	5,220	..	100	R	16	(81)	Req	43	No	July
Hahnemann Hospital ✦[1,2]	Philadelphia	NPAssn	655	10,412	51	100	R	24	No	Req	60	No	July
Hospital of the Protestant Episcopal Church ✦[2]	Philadelphia	Church	552	7,860	..	100	R	18	No	Req	47	No	JanJuly
Hospital of the University of Pennsylvania ✦[1,2]	Philadelphia	NPAssn	729	15,021	..	100	R	19	No	Req	63	No	July
Hospital of the Woman's Medical College ✦[2]	Philadelphia	NPAssn	202	4,060	65	100	R	6	No	Req	45	(b)	JanJuly
Jefferson Medical College Hospital ✦[2]	Philadelphia	NPAssn	747	16,715	60	..	R	28	No	Req	52	No	July
Jewish Hospital ✦[1,2]	Philadelphia	NPAssn	454	8,291	41	100	R	18	(82)	Req	58	No	July
Lankenau Hospital ✦	Philadelphia	NPAssn	259	5,219	..	100	R	10	(83)	Req	53	No	July
Memorial Hospital [2]	Philadelphia	NPAssn	118	2,631	39	99	R	2	No	Req	25	$100	July
Mercy Hospital [1]	Philadelphia	NPAssn	120	1,741	..	100	R	5	No	Req	64	$15	July
Methodist Hospital	Philadelphia	Church	246	4,833	..	100	R	8	No	Op	32	$20	July
Misericordia Hospital [1,2]	Philadelphia	Church	293	5,556	32	100	R	9	No	Req	35	No	July
Mount Sinai Hospital ✦[1,2]	Philadelphia	NPAssn	317	6,019	58	25	R	14	No	Req	58	No	July
Nazareth Hospital [1]	Philadelphia	Church	185	4,114	25	100	R	4	No	Op	30	$40	July
Northeastern Hospital [1,2]	Philadelphia	NPAssn	102	2,386	45	..	R	4	No	Req	..	...	July
Pennsylvania Hospital ✦[2]	Philadelphia	NPAssn	559	9,092	..	100	R	18	(84)	Req	40	No	July
Philadelphia General Hospital ✦[1,2]	Philadelphia	City	2,360	22,778	100	..	R	67	(82)	Req	53	No	July
Presbyterian Hospital ✦	Philadelphia	Church	409	6,110	..	100	R	12	No	Req	69	No	JanJuly
St. Agnes Hospital	Philadelphia	Church	456	7,566	..	..	R	6	No	Req	34	...	July
St. Joseph's Hospital [1]	Philadelphia	Church	218	3,566	10	..	R	6	No	Req	19	$50	July
St. Luke's and Children's Medical Center ✦[1,2]	Philadelphia	NPAssn	340	5,500	55	90	R	9	No	Req	18	$75	JanJuly
St. Mary's Hospital [1]	Philadelphia	Church	280	4,741	..	100	R	8	No	Req	22	...	July
Temple University Hospital ✦[1,2]	Philadelphia	NPAssn	509	11,175	..	100	R	19	(85)	Req	42	No	July
Woman's Hospital ✦[2]	Philadelphia	NPAssn	185	3,443	42	100	R	6	No	Req	46	(b)	July
Women's Homoeopathic Hospital [1]	Philadelphia	NPAssn	210	3,765	70	100	R	4	No	Req	20	$75	AprJuly
Allegheny General Hospital ✦	Pittsburgh	NPAssn	678	10,909	54	100	R	16	No	Req	21	No	July
Mercy Hospital ✦[1]	Pittsburgh	Church	687	13,628	..	..	R	24	(86)	Op	23	No	July
Montefiore Hospital ✦	Pittsburgh	NPAssn	257	5,820	16	100	R	10	(87)	Req	35	$25	JanJuly
Pittsburgh Hospital [1]	Pittsburgh	NPAssn	210	4,408	90	100	R	6	No	Req	19	$25	AprJuly
Presbyterian Hospital ✦[1]	Pittsburgh	NPAssn	235	4,320	12	100	R	10	(88)	Req	38	No	July
St. Francis Hospital ✦[2]	Pittsburgh	NPAssn	698	11,392	..	..	R	20	(87)	Req	19	...	July
St. John's General Hospital [1]	Pittsburgh	NPAssn	250	5,528	45	55	R	6	No	Req	19	$50	July
St. Joseph's Hospital and Dispensary	Pittsburgh	Church	200	4,215	..	100	R	8	No	Req	22	$75	July
St. Margaret Memorial Hospital	Pittsburgh	Church	150	2,510	..	100	R	4	No	Req	23	$50	July
Shadyside Hospital [1]	Pittsburgh	NPAssn	333	7,209	7	100	R	10	No	Op	..	$75	July
South Side Hospital [1]	Pittsburgh	NPAssn	225	4,847	..	100	R	7	No	Req	17	$75	JanJuly
Western Pennsylvania Hospital ✦[1,2]	Pittsburgh	NPAssn	587	10,337	84	..	R	18	No	Req	26	No	July
Pottsville Hospital [1]	Pottsville	NPAssn	172	2,694	56	..	R	4	No	Req	21	$100	July
Community General Hospital [1,2]	Reading	NPAssn	134	3,486	53	..	R	4	No	Req	36	...	July
Reading Hospital ✦[1,2]	Reading	NPAssn	355	7,234	20	100	R	10	No	Req	64	$100	July

Abbreviations and other references will be found on page 1321.

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Name of Hospital	Location	Control	Capacity	Total Patients Admitted	% Service Cases	% Private Patients Assigned to Interns	Type of Internship	Internships	Affiliated Service	Outpatient Service	Autopsy Percentage	Stipend per Month	Service Commences
PENNSYLVANIA—Continued													
St. Joseph's Hospital +[1]	Reading	Church	225	5,176	18	90	R	6	(89)	Req	52	$100	July
Robert Packer Hospital +	Sayre	NPAssn	325	8,060	..	35	R	10	No	Req	41	No	July
Moses Taylor Hospital [1]	Scranton	NPAssn	120	1,498	..	100	R	3	(90)	Req	28	$50	July
Scranton State Hospital [1]	Scranton	State	310	5,163	60	20	R	10	No	Req	17	$92	July
Sewickley Valley Hospital [1]	Sewickley	NPAssn	185	5,513	..	100	R	4	No	Req	28	$100	JanJuly
Uniontown Hospital	Uniontown	NPAssn	230	6,580	25	82	R	5	No	Req	33	$75	July
Washington Hospital	Washington	NPAssn	224	4,741	7	100	R	8	No	Req	28	$100	July
Chester County Hospital [3]	West Chester	NPAssn	178	3,498	53	50	R	4	No	Op	18	$100	July
Mercy Hospital [1,3]	Wilkes-Barre	Church	230	5,371	33	90	R	6	No	Req	29	$50	July
Wilkes-Barre General Hospital +[1]	Wilkes-Barre	NPAssn	403	7,805	38	..	R	10	No	Req	20	$50	July
Columbia Hospital +	Wilkinsburg	Church	226	4,780	13	100	R	5	No	Req	..	$25	AprJuly
Williamsport Hospital +[1]	Williamsport	NPAssn	275	6,658	32	68	R	7	No	Req	24	$75	July
Windber Hospital [1]	Windber	NPAssn	117	2,447	..	100	R	4	No	Req	15	$50	July
York Hospital +[3]	York	NPAssn	248	5,490	..	..	R	8	No	Req	17	$65	July
RHODE ISLAND													
Memorial Hospital [1]	Pawtucket	NPAssn	202	5,250	45	39	R	6	No	Req	25	$50	July
Homeopathic Hospital	Providence	NPAssn	196	4,948	10	85	R	5	No	Req	16	$100	JanJuly
Rhode Island Hospital +[2]	Providence	NPAssn	499	10,795	52	..	R	24	(91)	Req	58	No	JanJuly
St. Joseph's Hospital [3]	Providence	Church	385	7,319	10	50	R	6	No	Req	..	$100	July
SOUTH CAROLINA													
Roper Hospital +[1,3]	Charleston	NPAssn	370	10,926	44	100	R	21	No	Req	43	$35	JanJuly
Columbia Hospital [1]	Columbia	County	306	8,962	16	100	R	10	No	Req	26	$35(b)	July
Greenville General Hospital [1]	Greenville	City	362	10,554	20	100	R	7	No	Req	56	$100(b)	July
TENNESSEE													
Baroness Erlanger Hospital +[1,3]	Chattanooga	CyCo	460	10,657	35	100	R	20	(92)	Req	..	$60	July
Knoxville General Hospital +[1]	Knoxville	City	525	8,729	35	100	R	9	No	Req	21	$40	July
Baptist Memorial Hospital +	Memphis	Church	500	20,403	68	75	R	15	No	None	22	$50	July
John Gaston Hospital +[3]	Memphis	City	550	14,229	95	100	R	26	No	Req	48	$35	July
Methodist Hospital +[1]	Memphis	Church	300	11,255	10	25	R	10	No	None	23	$50	July
St. Joseph Hospital +	Memphis	Church	340	10,266	7	100	R	8	No	None	26	$50	July
George W. Hubbard Hospital +[1,3]	Nashville	NPAssn	186	3,089	84	20	R	12	No	Op	30	$10(b)	July
Nashville General Hospital +	Nashville	City	305	5,718	77	23	R	9	No	Req	19	$25	July
Protestant Hospital	Nashville	NPAssn	128	4,150	..	100	R	3	No	None	28	..	July
St. Thomas Hospital +	Nashville	Church	250	7,413	24	100	S	8	(93)	None	47	$60	July
Vanderbilt University Hospital +[1]	Nashville	NPAssn	398	7,159	..	..	S	23	No	Op	53	No	July
Oak Ridge Hospital	Oak Ridge	Fed	340	13,496	100	..	R	4	No	Req	50	...	July
TEXAS													
Brackenridge Hospital [1,3]	Austin	City	272	5,563	31	100	R	8	No	Req	23	$50	July
Baylor University Hospital +[1]	Dallas	Church	500	15,343	16	100	R	18	No	Req	24	$37.50	July
Methodist Hospital +[2]	Dallas	Church	250	8,488	6	100	R	7	No	Req	16	$25	July
Parkland Hospital +[1,3]	Dallas	CyCo	424	7,453	97	100	R	16	No	Req	29	$10	July
St. Paul's Hospital +	Dallas	Church	300	12,808	..	100	R	8	No	Req	23	$25	July
El Paso City-County Hospital	El Paso	CyCo	211	2,441	100	..	R	3	No	Req	61	$75	July
City-County Hospital [3]	Fort Worth	CyCo	188	3,234	100	..	R	8	No	Req	34	$25	July
Harris Memorial Methodist Hospital +[1]	Fort Worth	Church	368	10,415	13	100	R	8	No	Req	55	$25(b)	July
St. Joseph's Hospital	Fort Worth	Church	256	8,821	..	100	R	6	No	None	17	$100	July
John Sealy Hospital +[1]	Galveston	State	449	7,484	72	100	R	13	No	Req	60	$25	July
United States Marine Hospital [3]	Galveston	USPHS	160	3,384	100	..	R	6	...	Req	60	$142	July
Hermann Hospital +[1]	Houston	NPAssn	304	6,614	30	100	R	12	(94)	Req	51	$20	July
Jefferson Davis Hospital +[1,3]	Houston	CyCo	403	10,690	100	..	R	24	No	Req	29	$25	July
Methodist Hospital +[1]	Houston	Church	159	4,060	15	100	R	4	No	Op	32	$50	July
Medical and Surgical Memorial Hospital [1]	San Antonio	NPAssn	245	8,453	2	75	R	8	No	Req	29	$100	July
Nix Hospital [1]	San Antonio	Corp	181	4,088	..	100	R	2	No	None	22	$50	July
Robert B. Green Memorial Hospital [1,3]	San Antonio	County	245	3,802	100	..	R	12	No	Req	..	...	July
Santa Rosa Hospital +	San Antonio	Church	411	12,427	..	100	R	16	No	Req	21	$75	JanJuly
Kings Daughters Hospital [1]	Temple	NPAssn	126	3,096	..	75	R	2	No	None	19	$100	July
Scott and White Hospital +[1]	Temple	Corp	271	5,889	..	100	R	9	(95)	Op	34	$75	JanJuly
Wichita Falls Clinic Hospital	Wichita Falls	Part	90	4,005	..	100	R	3	No	Op	26	$150	July
UTAH													
Thomas D. Dee Memorial Hospital [1]	Ogden	Church	400	9,611	..	..	R	6	No	Req	..	$75	JanJuly
Dr. W. H. Groves Latter-Day Saints Hospital +[1]	Salt Lake City	Church	440	13,692	2	100	R	10	(96)	None	33	$25(b)	JanJuly
Holy Cross Hospital [1]	Salt Lake City	Church	260	5,942	1	100	R	4	No	None	32	$25(b)	JanJuly
St. Mark's Hospital	Salt Lake City	Church	245	5,121	..	100	R	6	No	Req	24	$25(b)	July
Salt Lake County General Hospital +[1]	Salt Lake City	County	340	5,223	93	100	R	13	No	Req	58	$25(b)	July
VERMONT													
Bishop DeGoesbriand Hospital +[1,3]	Burlington	Church	140	3,953	40	98	R	3	No	None	31	$75	July
Mary Fletcher Hospital +[1,3]	Burlington	NPAssn	230	5,565	35	100	R	5	No	Req	46	$50	July
VIRGINIA													
Alexandria Hospital +[1]	Alexandria	NPAssn	225	5,184	18	100	R	3	No	None	38	$50	July
University of Virginia Hospital +[1]	Charlottesville	State	549	12,335	100	..	M	25	(97)	Req	41	No	July
Chesapeake and Ohio Hospital +	Clifton Forge	NPAssn	152	4,920	96	100	R	3	No	Req	42	$50	July
De Paul Hospital +[1]	Norfolk	Church	303	9,240	10	90	R	6	No	Req	30	$75	MarJuly
Norfolk General Hospital +[1]	Norfolk	NPAssn	397	11,459	10	100	R	14	No	Req	24	$50	July
United States Marine Hospital [3]	Norfolk	USPHS	420	7,155	100	..	R	12	(98)	Req	56	$142	July
Johnston-Willis Hospital +[1]	Richmond	Corp	154	4,936	..	75	R	5	No	None	61	$25(b)	July
Medical College of Virginia, Hosp. Div. +[1,3] (Memorial, Dooley and St. Philip Hosps.)	Richmond	State	811	12,725	62	100	R	42	No	Req	32	No	July
Stuart Circle Hospital	Richmond	Corp	126	3,363	..	100	R	3	No	None	56	$50(b)	July
Jefferson Hospital +	Roanoke	NPAssn	180	4,239	..	100	R	4	No	Req	18	$50	July
Lewis-Gale Hospital	Roanoke	NPAssn	194	4,688	..	100	R	4	No	Req	30	$75	July
WASHINGTON													
Columbus Hospital [1]	Seattle	Church	249	6,361	..	100	R	4	(99)	Req	20	$50	July
Doctors Hospital	Seattle	NPAssn	238	4,570	..	..	R	4	No	None	41	...	July
King County Hospital Unit No. 1 +[3] (Harborview)	Seattle	County	505	12,506	100	..	R	24	No	Req	21	$50	July
Providence Hospital +	Seattle	Church	434	11,810	..	100	R	8	No	Req	45	...	July
Seattle General Hospital	Seattle	NPAssn	139	4,105	..	100	R	4	(100)	None	17	$75	July

Abbreviations and other references will be found on page 1321.

Name of Hospital	Location	Control	Capacity	Total Patients Admitted	% Service Cases	% Private Patients Assigned to Interns	Type of Internship	Internships	Affiliated Service	Outpatient Service	Autopsy Percentage	Stipend per Month	Service Commences
WASHINGTON—Continued													
Swedish Hospital ✚	Seattle	NPAssn	374	9,771	..	100	R	10	(100)	Req	26	$50	July
United States Marine Hospital [2]	Seattle	USPHS	414	7,078	100	..	R	13	No	Req	75	$142	July
Virginia Mason Hospital ✚	Seattle	NPAssn	200	6,481	..	100	R	8	No	Req	44	$50	July
Deaconess Hospital ✚[1]	Spokane	Church	244	7,795	..	100	R	6	(101)	None	30	$85	July
Sacred Heart Hospital	Spokane	Church	410	11,090	..	..	R	8	No	None	17	$80	July
St. Luke's Hospital [1]	Spokane	NPAssn	280	6,423	..	100	R	5	No	Op	38	$75	July
Pierce County Hospital [1]	Tacoma	County	239	3,134	100	..	R	6	(102)	Req	37	$100	July
St. Joseph's Hospital	Tacoma	Church	341	8,832	..	100	R	4	No	None	25	$100	July
Tacoma General Hospital ✚	Tacoma	NPAssn	283	7,696	..	..	R	4	No	None	20	$75	July
Northern Permanente Foundation ✚[1]	Vancouver	NPAssn	360	11,087	..	..	R	8	No	Op	73	$100	AprJuly
WEST VIRGINIA													
Charleston General Hospital ✚[1]	Charleston	NPAssn	385	9,625	50	50	R	15	No	Req	42	$50(b)	July
Kanawha Valley Hospital	Charleston	Corp	165	4,565	75	75	R	2	No	Req	35	$100	July
Chesapeake and Ohio Hospital ✚	Huntington	NPAssn	185	3,503	..	..	R	3	No	Req	24	$50	July
St. Mary's Hospital ✚	Huntington	Church	270	10,210	5	100	R	5	No	None	27	$50	July
St. Joseph's Hospital ✚	Parkersburg	Church	153	3,806	..	100	R	4	No	Req	25	$100	July
Ohio Valley General Hospital	Wheeling	NPAssn	356	7,723	10	100	R	8	No	Req	..	$100	July
Wheeling Hospital	Wheeling	Church	270	6,287	10	..	R	5	No	None	..	$85	JanJuly
WISCONSIN													
St. Elizabeth Hospital	Appleton	Church	220	6,275	..	100	R	3	No	None	16	$50	July
Luther Hospital [1]	Eau Claire	NPAssn	176	4,168	..	95	R	4	No	None	50	$50(b)	July
St. Agnes Hospital	Fond du Lac	Church	331	7,323	..	100	R	4	No	None	27	$50	July
La Crosse Lutheran Hospital ✚	La Crosse	Church	132	4,130	..	100	R	3	No	None	38	...	July
St. Francis Hospital [1]	La Crosse	Church	315	7,755	..	100	R	5	No	Req	19	$100	July
Madison General Hospital [1]	Madison	NPAssn	293	6,252	..	100	R	6	No	None	21	$50	JanJuly
Methodist Hospital	Madison	Church	127	3,576	..	90	R	4	No	Req	24	$60(b)	July
St. Mary's Hospital [1]	Madison	Church	250	7,524	..	100	R	6	No	None	23	$50(b)	July
State of Wisconsin General Hospital ✚[1]	Madison	State	772	11,598	100	..	R	20	No	Req	61	No	July
St. Joseph's Hospital [1]	Marshfield	Church	216	5,499	..	80	R	3	No	Req	15	$100	July
Columbia Hospital ✚	Milwaukee	NPAssn	170	4,330	7	100	R	8	No	Req	50	$25	July
Evangelical Deaconess Hospital [1]	Milwaukee	Church	170	5,358	1	99	R	6	No	Req	..	$75	JanJuly
Milwaukee County Hospital ✚[1,2]	Milwaukee	County	804	11,109	100	..	R	40	(102)	Req	40	$10(b)	July
Milwaukee Hospital ✚[1]	Milwaukee	Church	350	8,077	2	..	R	10	No	Req	43	$30	July
Misericordia Hospital	Milwaukee	Church	150	4,318	..	..	R	3	No	None	24	$65	JanJuly
Mount Sinai Hospital ✚	Milwaukee	NPAssn	198	7,093	3	100	R	8	No	Req	34	$40	July
St. Joseph's Hospital ✚	Milwaukee	Church	410	11,889	..	100	R	10	No	Op	20	$40	AprJuly
St. Luke's Hospital ✚[1]	Milwaukee	Church	130	4,889	..	100	R	4	(104)	None	26	$50	July
St. Mary's Hospital ✚	Milwaukee	Church	250	6,826	..	..	R	3	No	Req	20	$50	July
St. Michael's Hospital	Milwaukee	Church	170	5,016	..	..	R	4	No	Req	33	$75	July
Mercy Hospital	Oshkosh	Church	250	5,971	..	..	R	4	No	None	19	...	July
St. Mary's Hospital	Racine	Church	271	5,775	..	100	R	4	No	None	..	...	July
CANAL ZONE													
Gorgas Hospital ✚	Ancon	Fed	1,485	21,615	100	..	R	23	No	Req	76	$125	JanJuly
HAWAII													
Kuakini Hospital	Honolulu	NPAssn	140	4,837	..	..	R	3	No	None	33	...	July
Queen's Hospital ✚[1]	Honolulu	NPAssn	392	12,961	5	100	R	12	(105)	Req	61	$75	JanJuly
St. Francis Hospital	Honolulu	Church	130	5,459	..	..	R	2	No	None	45	$50	June
PHILIPPINES													
Philippine General Hospital	Manila	.....	...	.....	..	..	..	..	...	....	..	...	.....
PUERTO RICO													
Arecibo Charity District Hospital [1]	Arecibo	Govt	318	4,108	100	..	R	4	No	Op	33	...	July
Bayamon District Hospital	Bayamon	Govt	335	5,575	100	..	R	8	No	Req	18	$150	July
Fajardo Charity District Hospital [1]	Fajardo	Govt	335	4,538	100	..	R	6	No	Req	45	$25	July
Presbyterian Hospital	San Juan	Church	130	2,800	50	90	R	6	No	Req	19	$10	July

HOSPITALS APPROVED FOR INTERNSHIPS IN THE DOMINION OF CANADA

For the benefit of graduates of approved medical colleges who desire an internship in Canada, the Council on Medical Education and Hospitals of the American Medical Association has declared that hospitals which conform to the standards of the Canadian Medical Association should be regarded as giving an internship equivalent in educational value to that offered by hospitals in the United States approved for intern training by the Council. It is understood, however, that this statement applies only to hospitals that are unqualifiedly "Approved" under the Canadian plan and does not apply to that group referred to as "Commended."

The following list of hospitals, revised to June 1, 1946, has been furnished by the Canadian Medical Association.

Name of Hospital	Location
Victoria General Hospital	Halifax, N. S.
St. John General Hospital	St. John, N. B.
Hospital du St. Sacrament	Quebec, Que.
Hospital Dieu de Quebec	Quebec, Que.
Hospital of the Infant Jesus	Quebec, Que.
Jeffrey Hale's Hospital	Quebec, Que.
Children's Memorial Hospital	Montreal, Que.
Homeopathic Hospital	Montreal, Que.
Hospital Notre Dame	Montreal, Que.
Hospital Ste. Jeanne d'Arc	Montreal, Que.
Hospital Ste. Justine	Montreal, Que.
Hotel Dieu de Montreal	Montreal, Que.
Hospital Ste. Luc	Montreal, Que.
Jewish General Hospital	Montreal, Que.
Montreal General Hospital	Montreal, Que.
Royal Victoria Hospital	Montreal, Que.
St. Mary's Hospital	Montreal, Que.
Woman's General Hospital	Montreal, Que.
Hamilton General Hospital	Hamilton, Ont.
St. Joseph's Hospital	Hamilton, Ont.
Ottawa Civic Hospital	Ottawa, Ont.
Ottawa General Hospital	Ottawa, Ont.
Hotel Dieu Hospital	Kingston, Ont.
Kingston General Hospital	Kingston, Ont.
Hospital for Sick Children	Toronto, Ont.
Mount Sinai Hospital	Toronto, Ont.
St. Joseph's Hospital	Toronto, Ont.
St. Michael's Hospital	Toronto, Ont.
Toronto East General Hospital	Toronto, Ont.
Toronto General Hospital	Toronto, Ont.
Toronto Western Hospital	Toronto, Ont.
Women's College Hospital	Toronto, Ont.
St. Joseph's Hospital	London, Ont.
Victoria Hospital	London, Ont.
Grace Hospital	Windsor, Ont.
Metropolitan General Hospital	Windsor, Ont.
Hotel Dieu of St. Joseph	Windsor, Ont.
Children's Hospital	Winnipeg, Man.
Misericordia Hospital	Winnipeg, Man.
Winnipeg General Hospital	Winnipeg, Man.
St. Boniface Hospital	St. Boniface, Man.
Regina Grey Nuns' Hospital	Regina, Sask.
Regina General Hospital	Regina, Sask.
St. Paul's Hospital	Saskatoon, Sask.
Saskatoon City Hospital	Saskatoon, Sask.
Holy Cross Hospital	Calgary, Alta.
Edmonton General Hospital	Edmonton, Alta.
Misericordia Hospital	Edmonton, Alta.
Royal Alexandra Hospital	Edmonton, Alta.
University of Alberta Hosp.	Edmonton, Alta.
St. Paul's Hospital	Vancouver, B. C.
Vancouver General Hospital	Vancouver, B. C.
Royal Jubilee Hospital	Victoria, B. C.
St. Joseph's Hospital	Victoria, B. C.

Abbreviations and other references will be found on page 1321.

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ABBREVIATIONS AND NOTES

CyCo	City and County	NPAssn	Nonprofit association	R	Rotating
Corp	Corporation unrestricted as to profit	Op	Optional	S	Straight
M	Mixed	Part	Partnership	USPHS	United States Public Health Service
	1. Women interns admitted.	Req	Required	(a)	In lieu of maintenance.
	2. Women interns only.			(b)	Bonus in addition to salary.
	3. Dental interns employed.			(c)	Male patients only.

Affiliations as Referred to in Column Headed: "Affiliated Service"

4. Children's Hospital and Crippled Children's Clinic, Birmingham, pediatrics, orthopedics.
5. Arkansas Children's Home and Hospital, State Hospital, Little Rock, pediatrics, psychiatry.
6. Children's Hospital, Eye and Ear Hospital, Good Hope Clinic, Los Angeles, pediatrics, ENT, outpatient service.
7. Children's Hospital, Los Angeles Maternity Service, pediatrics, obstetrics.
8. Fairmont Hospital of Alameda County, San Leandro, and Arroyo-Del Valle Sanatorium, Livermore, medicine, surgery, tuberculosis.
9. Woman's Hospital, Pasadena, obstetrics.
10. Laguna Honda Home, San Francisco, chronic diseases; Hassler Health Home, Redwood City, tuberculosis.
11. St. Francis Hospital, San Francisco, obstetrics.
12. Franklin Hospital, San Francisco, obstetrics; Vallejo Community Hospital, Vallejo, tuberculosis.
13. Langley Porter Clinic, Children's Hospital, San Francisco, psychiatry, pediatrics; Permanente Foundation Hospital, Oakland, industrial.
14. California Hospital, Los Angeles, pediatrics.
15. Boulder-Colorado Sanitarium and Hospital.
16. Childrens Hospital, Denver, pediatrics.
17. Undercliff, Meriden State Tuberculosis Sanatorium, Meriden.
18. Gallinger Municipal Hospital, Washington.
19. Children's Hospital, Eastern Dispensary and Casualty Hospital, Washington, pediatrics, emergency.
20. Frank Cuneo Hospital, Chicago, obstetrics.
21. Municipal Contagious Disease Hospital, Chicago; Winfield Sanatorium, Winfield, tuberculosis.
22. Children's Memorial Hospital, Chicago, pediatrics; Lake County Tuberculosis Sanatorium, Waukegan.
23. Chicago Maternity Center, obstetrics, gynecology; Chicago Memorial Hospital, pediatrics.
24. Children's Memorial Hospital, Chicago, pediatrics.
25. Indiana University Medical Center, Indianapolis, pediatrics.
26. Salvation Army Home and Hospital, Sedgwick County Hospital, Wichita, obstetrics, general.
27. St. Joseph's Hospital, Sedgwick County Hospital, Wichita.
28. Louisville General Hospital, obstetrics, gynecology.
29. Children's Free Hospital, Kosair Crippled Children Hospital, Louisville; Waverly Hills Sanatorium, Waverly Hills, tuberculosis.
30. Charity Hospital of Louisiana, New Orleans, pathology.
31. University Hospital, Baltimore, obstetrics.
32. Charles V. Chapin Hospital, Providence, R. I., communicable diseases.
33. Wesson Maternity Hospital, Shriners Hospital for Crippled Children, Springfield, obstetrics, orthopedic surgery.
34. Health Department Hospital, Shriners Hospital for Crippled Children, Wesson Maternity Hospital, Springfield, tuberculosis, communicable diseases, orthopedics, obstetrics.
35. City of Detroit Receiving Hospital, Herman Kiefer Hospital, Children's Hospital, Detroit.
36. Herman Kiefer Hospital, Woman's Hospital, Detroit, obstetrics.
37. Herman Kiefer Hospital, Detroit, tuberculosis, communicable diseases.
38. Herman Kiefer Hospital, Children's Hospital, Detroit.
39. St. Joseph's Retreat, Dearborn, psychiatry; Herman Kiefer Hospital, Detroit, communicable diseases.
40. Grace Hospital, Detroit, obstetrics.
41. Children's Hospital, City of Detroit Receiving Hospital, Detroit.
42. Ingham Sanatorium, Lansing, tuberculosis.
43. Miller Memorial Hospital, Duluth, outpatient service.
44. St. Mary's Hospital, Minneapolis, obstetrics.
45. Gillette State Hospital for Crippled Children, St. Paul.
46. Children's Hospital, pediatrics; Amherst H. Wilder Dispensary, St. Paul
47. Kansas City Municipal Tuberculosis Hospital.
48. Washington University Group of Hospitals includes Barnes Hospital, McMillan Hospital, St. Louis Children's Hospital and St. Louis Maternity Hospital.
49. Robert Koch Hospital, Koch, tuberculosis.
50. St. Mary's Group of Hospitals includes the Firmin Desloge Hospital, St. Mary's Hospital and Mount St. Rose Sanatorium.
51. St. Elizabeth Hospital, Elizabeth, obstetrics.
52. Margaret Hague Maternity Hospital, Hudson County Tuberculosis Hospital, Jersey City.
53. Margaret Hague Maternity Hospital, Jersey City.
54. Fairview Sanitarium, New Lisbon, tuberculosis.
55. Anthony N. Brady Maternity Home, Albany.
56. Sydenham Hospital, Baltimore, communicable diseases.
57. Children's Hospital, Buffalo, pediatrics.
58. Louise de Marillac Hospital, Buffalo.
59. Edward J. Meyer Memorial Hospital, Buffalo, tuberculosis, psychiatry.
60. Chemung County Sanatorium, Elmira, tuberculosis.
61. Our Lady of Victory Infants' Home, Lackawanna, obstetrics, pediatrics.
62. Harlem Hospital, New York City, obstetrics.
63. Beth Israel Hospital, New York City, obstetrics.
64. Norwegian Lutheran Deaconesses' Home and Hospital, Brooklyn, obstetrics.
65. New York Hospital, pediatrics, obstetrics.
66. Misericordia Hospital, New York City, obstetrics.
67. Rotation service established between Hospital of the Good Shepherd, Syracuse Memorial Hospital, City Hospital and Syracuse Psychopathic Hospital, comprising Syracuse University Medical Center Hospitals.
68. Good Samaritan Hospital, Charlotte, obstetrics.
69. North Carolina Orthopedic Hospital, Gastonia.
70. Children's Hospital, Akron, pediatrics.
71. Children's Hospital, Cincinnati, pediatrics.
72. Cincinnati General Hospital.
73. St. Ann's Maternity Hospital, Cleveland.
74. Children's Hospital, Columbus, pediatrics.
75. Children's Hospital, Grant Hospital, Columbus, pediatrics, obstetrics.
76. Western Oklahoma Tuberculosis Sanatorium, Clinton; Central Oklahoma State Hospital, Norman.
77. Shriners Hospital for Crippled Children, Portland.
78. St. Vincent's Hospital, Portland.
79. Providence Hospital, Portland, pediatrics.
80. Vanport City Hospital, Portland, general.
81. Hospital of the University of Pennsylvania, Philadelphia, obstetrics.
82. Philadelphia Hospital for Contagious Diseases.
83. Children's Hospital of the Mary J. Drexel Home, Philadelphia, pediatrics.
84. Children's Hospital, Philadelphia, pediatrics.
85. Shriners Hospital for Crippled Children, Philadelphia Hospital for Contagious Diseases.
86. Rosella Foundling and Maternity Hospital, Pittsburgh.
87. Municipal Hospital, Pittsburgh, communicable diseases.
88. Elizabeth Steel Magee Hospital, Children's Hospital, Eye and Ear Hospital, Woman's Hospital, Western State Psychiatric Institute and Clinic, Municipal Hospital, comprising Pittsburgh University Medical Center.
89. Berks County Tuberculosis Sanatorium, Reading.
90. Scranton State Hospital, Scranton, obstetrics.
91. Charles V. Chapin Hospital, Providence, communicable diseases.
92. T. C. Thompson Children's Hospital, Pine Breeze Sanatorium, Chattanooga, pediatrics, tuberculosis.
93. Vanderbilt University Hospital, Nashville.
94. Southern Pacific Hospital, Houston, industrial medicine and surgery.
95. Gulf, Colorado and Santa Fe Hospital, Temple, medicine, surgery.
96. Utah State Hospital, Provo, psychiatry.
97. Blue Ridge Sanatorium, Charlottesville, tuberculosis.
98. Norfolk General Hospital, Norfolk, obstetrics; Kings Daughters Hospital, Portsmouth, pediatrics.
99. King County Hospital, Seattle, outpatient service.
100. Children's Orthopedic Hospital, Seattle.
101. Edgecliff Sanatorium, Spokane, tuberculosis.
102. Mountain View Sanatorium, Lakeview, tuberculosis.
103. South View Hospital, Milwaukee, communicable diseases.
104. Milwaukee Children's Hospital, pediatrics.
105. Kauikeolani Children's Hospital, Honolulu, pediatrics.

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APPROVED RESIDENCIES AND FELLOWSHIPS FOR VETERAN AND CIVILIAN PHYSICIANS

Council on Medical Education and Hospitals of the American Medical Association
535 North Dearborn Street, Chicago 10

Revised to August 17, 1946

Hospitals, 887; Assistant Residencies, Residencies and Fellowships, 8,930

The following educational services investigated and approved by the Council on Medical Education and Hospitals are considered in position to furnish acceptable residency training in accordance with standards adopted by the American Medical Association. In practically all fields these training programs have been reviewed in collaboration with the respective specialty boards. Included in the present list is the expanded number of residencies now available in those approved hospitals which have completed their plans to provide further opportunities for returning medical officers. Many additional residencies recently organized or in process of development may soon be added to the approved list. All arrangements for appointments should be made directly with the hospital concerned in the usual manner.

The star (*) indicates hospitals that are also approved for the training of interns. All hospitals on the approved intern list are likewise accredited for mixed residencies which represent general house staff assignments following the internship.

The dagger (†) represents temporary approval in accordance with the plan for the temporary approval of residencies in specialties as announced in THE JOURNAL A. M. A., March 2, 1946, p. 586.

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1. ALLERGY

The following services are approved by the Council and the American Board of Internal Medicine

Name of Hospital	Location	Chief of Service	Inpatients Treated	Outpatient Visits	Asst. Res. and Residencies*	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
†Research and Educational Hospital*	Chicago	W. H. Welker and H. Poncher	526	4,188	2	1/1	12-36	$150.00
†Montefiore Hospital*	Pittsburgh	L. H. Criep	...	7,690	3	4/1	12	50.00
†University of Virginia Hospital*	Charlottesville, Va.	O. Swineford Jr.	...	957	3	7/1	12-24	83.33

2. ANESTHESIOLOGY

United States Navy.—Residencies available to medical officers, U. S. Navy.
†U. S. Naval Hospital,* St. Albans, N. Y.

Name of Hospital	Location	Chief of Service	Inpatients Treated*	Total Anesthetics	Inhalation Anesthetics	Autopsy Percentage	Asst. Res. and Residencies*	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
†Jefferson and Hillman Hospitals*	Birmingham, Ala.		16,245	6,670	1,102	30	1	.....	12	.....
†Employees Hospital of the Tennessee Coal, Iron and Railroad Company*	Fairfield, Ala.	L. Noland	7,403	2,330	1,177	30	1	7/1	12-36	$200.00
Los Angeles County Hospital**	Los Angeles	W. W. Hutchinson	48,835	7,866	2,293	34	2	4/1, 7/1	12	157.20
White Memorial Hospital*	Los Angeles	A. J. Martinson	9,642	5,667	1,370	58	2	4/1	12	31.00
Samuel Merritt Hospital	Oakland, Calif.	B. M. Anderson	9,376	5,506	1,986	20	2	1/1, 7/1	12-24	75.00
†Children's Hospital**	San Francisco	H. D. Lapp	6,742	3,197	2,029	51	1	.....	12	.....
Stanford University Hospitals*	San Francisco	W. B. Neff	10,159	4,827	2,340	43	2	7/1	12-24	50.00
University of California Hospital**	San Francisco	H. R. Hathaway	7,554	...	...	78	1	Varies	12	65.00
Hartford Hospital*	Hartford, Conn.	C. B. Hickcox	21,949	18,263	9,093	39	14	.....	12-24	50.00
†Waterbury Hospital**	Waterbury, Conn.	F. C. Wilcox Jr.	8,973	4,247	2,252	33	2	7/1	12-24	.....
†George Washington University Hospital*	Washington, D. C.		2,897	1,261	654	60	1	.....	12	.....
University Hospital**	Augusta, Ga.	P. P. Volpitto	10,438	5,242	3,922	14	3	7/1	12	35.00
Michael Reese Hospital**	Chicago	J. Hickman	15,904	4,853	3,518	50	5	.....	12-36	.....
†Mount Sinai Hospital**	Chicago	R. Weyl	7,307	3,884	.....	41	1	7/1	12-24	50.00
†Passavant Memorial Hospital**	Chicago	M. Karp	6,181	3,165	1,962	61	1	7/1	12-24	100.00
Research and Educational Hospitals**	Chicago	W. W. Cassels	4,892	2,438	1,654	89	4	.....	12-36	55.00
St. Luke's Hospital**	Chicago	W. A. Conroy	13,987	9,524	3,949	61	5	7/1	12-36	25.00
University of Chicago Clinics**	Chicago	H. Livingstone Adams	11,921	8,719	7,604	76	3	Varies	12-36	50.00
Wesley Memorial Hospital**	Chicago	M. Karp	11,482	5,145	2,558	59	3	Varies	12-36	25.00
Evanston Hospital*	Evanston, Ill.	J. H. Bennett	7,569	4,348	3,860	85	1	.....	12	50.00
Indianapolis City Hospital*	Indianapolis	L. B. Mueller	10,251	6,186	2,047	38	2	7/1	12-24	100.00
Methodist Hospital*	Indianapolis	J. M. Whitehead	20,262	17,568	10,501	27	4	.....	12-24	200.00
†Memorial Hospital*	South Bend, Ind.		9,180	.....	.....	26	1	.....	12	.....
University Hospitals**	Iowa City, Ia.	S. C. Cullen	16,818	8,075	4,701	41	9	7/1	12	25.00
University of Kansas Hospitals**	Kansas City, Kan.	P. Lorhan	8,247	.....	.....	57	2	.....	12	.....
Louisville General Hospital*	Louisville, Ky.	D. Dollar	11,121	2,509	751	29	3	4/1	12-24	45.00
Charity Hospital of Louisiana**	New Orleans	A. M. Caine	34,317	14,266	7,797	42	7	Varies	12-36	25.00
†Beverly Hospital*	Beverly, Mass.	J. H. Fine	4,118	2,622	1,198	72	1	1/1	12-24	50.00
†Boston City Hospital**	Boston	S. C. Wiggin	32,258	11,356	4,114	27	4	Varies	24	50.00
Faulkner Hospital**	Boston	S. C. Wiggin	3,918	2,929	730	50	2	9/1	24	83.33
Lahey Clinic*	Boston	U. H. Eversole	...	10,000	6,000	..	10	Varies	12-36	125.00
Massachusetts General Hospital**	Boston		.....	.....	...	..	7	.....	12	.....
Massachusetts Memorial Hospitals**	Boston	E. B. Ferguson	7,973	5,329	2,818	71	2	8/15	12-24	50.00
New England Hospital for Women and Children**	Boston	E. Bartlett	3,993	3,295	2,870	33	3	11/1	12	.....
†St. Elizabeth Hospital*	Boston	L. P. Zentgraf	6,335	5,177	2,649	19	1	Varies	12-24	.....
Newton-Wellesley Hospital**	Newton, Mass.	R. S. Hunt	5,198	3,796	2,373	18	1	1/1	12-36	100.00
†Salem Hospital*	Salem, Mass.	R. R. Richardson	5,646	3,449	2,417	38	1	Varies	12-24	.....
City of Detroit Receiving Hospital**	Detroit	I. B. Taylor	17,230	.....	.....	40	2	Varies	12-36	145.57
Providence Hospital*	Detroit	N. Bittrick	13,113	7,353	4,200	61	2	.....	12	.....

Numerical and other references will be found on page 1354.

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2. ANESTHESIOLOGY—Continued

Name of Hospital	Location	Chief of Service	Inpatients Treated [6]	Total Anesthetics	Inhalation Anesthetics	Autopsy Percentage	Asst. Res. and Residencies [8]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
University Hospitals [*4]	Minneapolis	R. T. Knight	8,007	3,971	2,464	67	3	7/1	12	.....
Mayo Foundation	Rochester, Minn.	J. S. Lundy	(See page 1534)				10	.....	12	.....
†Ancker Hospital *	St. Paul		6,387	6,621	867	73	1	.....	12	.....
West Jersey Homeopathic Hospital *	Camden, N. J.	K. S. Russell	5,119	2,470	1,250	34	2	.....	12	.....
Jersey City Hospital *	Jersey City, N. J.	W. Gleeson	18,805	5,170	1,825	23	6	.....	12-24	.....
Albany Hospital [*4]	Albany, N. Y.	B. Etsten	13,116	6,051	4,500	57	5	4/1	12	$ 25.00
Jewish Hospital [*4]	Brooklyn	I. M. Pallin	13,038	7,892	2,629	35	4	7/1	36	120.00
Buffalo General Hospital [*4]	Buffalo	C. J. Durshordwe	11,141	6,589	3,468	46	2	4/1	12-36	25.00
Bellevue Hospital, Div. III—N. Y. Univ. [*4]	New York City	E. A. Rovenstine	57,864[b]	19,159[b]	9,345[b]	28	11	Varies	12-36	50.00
†Beth Israel Hospital [*4]	New York City	S. G. Hershey	7,551	9,026	1,461	29	2	1/1, 7/1	12-24	50.00
Flower and Fifth Avenue Hospitals [*4]	New York City	D. E. Brace	9,574	8,632	5,040	32	4	7/1	12	50.00
French Hospital [*4]	New York City	S. H. Lesinger	5,869	2,579	1,651	31	1	1/1	12	100.00
†Goldwater Memorial Hospital [*4]	New York City	E. A. Rovenstine	1,505	296	168	38	2	4/1	12	100.00
Hospital for Joint Diseases [*4]	New York City	B. Rapoport	5,017	3,402	2,211	22	1	.....	12	.....
Metropolitan Hospital [*4]	New York City	F. E. Fierro	9,423	2,029	1,137	19	3	4/1	12	100.00
Mount Sinai Hospital [*4]	New York City		14,291	7,000	5,000	63	4	Varies	12-36	50.00
New York Polyclinic Medical School and Hospital *	New York City	B. H. Ellasberg	8,526	5,560	4,000	17	4	4/1	12	100.00
New York Post-Graduate Medical School and Hospital [*4]	New York City	M. C. Peterson	8,616	5,658	3,701	48	9	1/1, 5/1	12-24	75.00
†Presbyterian Hospital [*4]	New York City	V. Apgar	26,307	16,939	9,348	52	6	.....	12	50.00
St. Luke's Hospital *	New York City	E. Burford	8,166	5,711	2,975	33	6	7/1	12-36	125.00
St. Vincent's Hospital [*4]	New York City	G. H. Van Gilluwe	12,434	4,146	2,785	33	2	4/1	12-24	50.00
†Rochester General Hospital [*4]	Rochester, N. Y.	S. L. Sahler	9,761	6,619	4,642	75	1	Varies	12-36	85.00
Grasslands Hospital [*4]	Valhalla, N. Y.	W. Grillo	3,547	740	338	53	1	1/1	12-24	75.00
Cincinnati General Hospital *	Cincinnati		18,878	2,695	1,550	41	1	.....	12	.....
Cleveland Clinic Foundation Hospital	Cleveland	D. E. Hale	7,447	8,180	2,605	32	2	.....	12-36	100.00
†Mount Sinai Hospital [*4]	Cleveland	I. B. Gold	9,368	5,974	2,848	34	1	Varies	12	100.00
St. Luke's Hospital *	Cleveland	B. B. Sankey	10,526	6,317	5,316	46	2	4/1	24	50.00
Starling-Loving University Hospital [*4]	Columbus, O.	N. E. Lenahan	8,246	4,604	1,345	39	3	4/1	6-18	50.00
Huron Road Hospital [*4]	East Cleveland, Ohio	R. J. Whitacre	12,859	9,208	3,173	78	2	7/1	24	100.00
University Hospitals [*4]	Oklahoma City, Okla.	A. D. Foster	6,068	2,972	2,250	30	3	.....	12	.....
University of Oregon Medical School Hospitals and Clinics [*4]	Portland, Ore.	J. H. Hutton	6,400	9,134	1,528	45	3	Varies	12-24	75.00
†Abington Memorial Hospital [*4]	Abington, Pa.	R. W. Made	8,520	5,253	1,673	71	2	Varies	12-24	100.00
Hahnemann Hospital [*4]	Philadelphia	H. S. Ruth	10,412	8,273[b]	5,193[b]	60	2	4/1	12-24	50.00
Hosp. of the University of Pennsylvania [*4]	Philadelphia	R. Dripps	15,021	10,582	5,199	63	2	4/1	12-36	50.00
†Lankenau Hospital *	Philadelphia	F. J. Audin	5,219	5,944	4,206	53	1	7/1	12-36	100.00
Presbyterian Hospital [*4]	Philadelphia	F. Haugen	6,110	.....	.....	69	1	7/1	12	50.00
Temple University Hospital [*4]	Philadelphia	C. B. Hickcox	13,356	9,238	4,041	45	4	7/1	12-36	50.00
Reading Hospital [*4]	Reading, Pa.	P. D. Woodbridge	7,234	6,300	3,507	64	4	Varies	12-36	75.00
Rhode Island Hospital *	Providence, R. I.	M. Saklad	10,795	6,602	3,108	58	1	.....	12	.....
†Baroness Erlanger Hospital *	Chattanooga, Tenn.		10,637	3,405	2,008	13	1	.....	12	90.00
John Sealy Hospital *	Galveston, Tex.	H. C. Slocum	7,484	3,160	2,657	69	4	.....	12	.....
†Bishop De Goesbriand Hospital *	Burlington, Vt.	J. Abajian Jr.	3,953	.....	.....	31	1	7/1	12-36	50.00
Mary Fletcher Hospital *	Burlington, Vt.	J. Abajian Jr.	5,565	2,759	847	46	2	1/1, 7/1	12-36	100.00
State of Wisconsin General Hospital [*4]	Madison, Wis.	R. A. Waters	11,398	4,732	3,810	61	8	7/1	12-36	25.00
Columbia Hospital *	Milwaukee	H. A. Cunningham	4,330	3,345	2,099	50	1	1/1	12-36	50.00

Hospitals, 84; Assistant Residencies and Residencies, 260

3. CARDIOLOGY

Name of Hospital	Location	Chief of Service	Inpatients Treated [6]	Outpatient Visits	Deaths	Autopsies	Asst. Res. and Residencies [8]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Indiana University Medical Center [*4]	Indianapolis	G. Bond	.....	.....	..	..	1	.....	12	$ 33.33
House of the Good Samaritan *	Boston	H. Sprague	179	438	8	4	1	9/1	12-36	50.00
Massachusetts General Hospital *	Boston		.....	.....	...	..	1	.....	12	.....
Henry Ford Hospital [*4]	Detroit	F. J. Smith	901	10,960	109	46	4	4/1	12-36	175.00
Pennsylvania Hospital *	Philadelphia	W. D. Stroud	.....	2,250	6	2	1	12/1	12-36	35.00
St. Francis Hospital *	Pittsburgh	A. P. D'Zmura	(Included in Medicine)			..	1	.....	12	.....
Rhode Island Hospital *	Providence, R. I.	F. T. Fulton	2,200	.....	...	..	1	4/1	12	100.00

Hospitals, 7; Assistant Residencies and Residencies, 10

4. COMMUNICABLE DISEASES

United States Navy.—Residencies available to medical officers, U. S. Navy.
U. S. Naval Hospital *.....Great Lakes, Ill.
U. S. Naval Hospital *.....Navy Yard, S. C.

Name of Hospital	Location	Chief of Service	Inpatients Treated [6]	Deaths	Autopsies	Asst. Res. and Residencies [8]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Los Angeles County Hospital [*4]	Los Angeles	P. M. Hamilton	3,086	172	95	3	.....	12	.....
Children's Hospital [*4]	San Francisco	E. B. Shaw	.....	...	..	2	.....	12	.....
J. J. McCook Memorial Hospitals [*]	Hartford, Conn.	C. L. Thenebe	714	8	2	1	.....	12	.....
Cook County Hospital [*4]	Chicago	A. L. Hoyne	1,142	130	70	2	Varies	12-36	$ 25.00
Municipal Contagious Disease Hospital [*]	Chicago	A. L. Hoyne	1,751	104	69	12	.....	12	126.50
Sydenham Hospital [*]	Baltimore	H. L. Hodes	1,206	50	43	4	.....	12	40.00
Boston City Hospital [*]	Boston	E. H. Place	1,720	15	4	2	.....	12	50.00
Massachusetts Memorial Hospitals [*4]	Boston	C. Wesselhoeft	1,413	28	23	2	4/1	12	50.00
Belmont Hospital [*]	Worcester, Mass.	R. D. Cox	615	8	6	2	.....	12	133.00
Herman Kiefer Hospital [*]	Detroit	F. H. Top	2,142	115	57	8	7/1	12 +	200.00
Kansas City General Hospital [*]	Kansas City, Mo.	C. R. Ferris	442	49	20	1	1/1	12	75.00
St. Louis City Hospital [*]	St. Louis	R. W. Maxwell	.....	...	..	2	Varies	12	80.00
Essex County Hosp. for Contagious Dis. [*]	Belleville, N. J.	E. L. Smith	2,349	53	9	7	1/1, 7/1	12	125.00
Kingston Avenue Hospital [*]	Brooklyn	H. L. Barnes	2,668	64	24	6	4/1	12	120.00
Queens General Hospital [*]	Jamaica, N. Y.	H. A. Reisman	482	6	5	3	.....	12	70.00
Willard Parker Hospital [*]	New York City	B. W. Hamilton	4,749	67	36	13	4/1	12	100.00
City Hospital [*]	Cleveland	J. A. Toomey	2,110	139	60	4	7/1	12	50.00
Philadelphia Hosp. for Contagious Dis. [*]	Philadelphia	P. F. Lucchesi	3,290	46	25	4	4/1	12	60.00

Hospitals, 18; Assistant Residencies and Residencies, 78

Numerical and other references will be found on page 1354.

5. DERMATOLOGY AND SYPHILOLOGY

The following services are approved by the Council and the American Board of Dermatology and Syphilology (See footnotes 1, 2 and 3)

United States Navy.—Residencies available to medical officers, U. S. Navy.
U. S. Naval Hospital *[2] ..... Philadelphia

Name of Hospital	Location	Chief of Service	Inpatients Treated [6]	Outpatient Visits	Deaths	Autopsies	Asst. Res. and Residencies *	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
†Jefferson and Hillman Hospitals *[1,4]	Birmingham, Ala	R. O. Noojim	94	818	0	..	2	7/1	12-36	$ 50.00
Los Angeles County Hospital *[3,4]	Los Angeles	L. R. Baneroft	842	12,808	35	13	2	4/1, 7/1	12-36	157.20
Stanford University Hospitals *[1,4]	San Francisco	O. E. L. Schmidt	31	15,337	...	..	2	7/1	12-24	50.00
University of California Hospital *[3,4]	San Francisco	H. E. Miller	10	913	...	..	2	Varies	12	65.00
Colorado General Hospital *[1]	Denver	A. J. Markley	201	3,353	...	..	1	7/1	12-24	70.00
Georgetown University Hospital *[2]	Washington, D. C.	F. Eichenlaub	36	2,343	...	..	2	4/1	12-36	75.00
†Cook County Hospital *[1,4]	Chicago	M. H. Ebert	350	9,214	21	1	2	1/1	12-36	25.00
†Michael Reese Hospital *[1,4]	Chicago	R. H. Rattner	23	4,589	...	..	1	1/1	12	.....
Northwestern Univ. Medical Center *[3,4]	Chicago	E. A. Oliver	1,258	36,000	...	..	1	.....	12	83.33
Research and Educational Hospitals *[3]	Chicago	F. E. Senear	36	8,733	1	1	1	.....	12-36	55.00
University of Chicago Clinics *[3]	Chicago	S. Rothman	112	6,856	2	2	4	Varies	12-36	25.00
†Indianapolis City Hospital *[1]	Indianapolis	J. R. Brayton	386	15,697	5	4	1	7/1	12	.....
University Hospitals *[2,4]	Iowa City, Ia	R. Nomland	406	2,125	5	1	4	7/1	12	40.00
†University of Kansas Hospitals *[1,4]	Kansas City, Kan	C. C. Dennie	150	1,173	...	..	2	7/1	12	50.00
†Johns Hopkins Hospital *[1]	Baltimore	J. E. Moore	.....	4,797	...	..	3	4/1	12	.....
Charity Hospital of Louisiana *[2,4]	New Orleans	M. T. Van Studdiford	312	49,095	12	3	10	Varies	12-36	25.00
Boston City Hospital *[2,3]	Boston	J. G. Downing	113	21,900	2	..	1	.....	12	50.00
Massachusetts General Hospital *[3]	Boston		.....	.....	...	..	3	.....	12	.....
Massachusetts Memorial Hospitals *[1,4]	Boston	J. G. Downing and W. L. Fleming	.....	18,808	...	..	1	2/1	12	50.00
University Hospital *[3]	Ann Arbor, Mich	A. C. Curtis	697	7,558	5	3	8	Varies	12	101.00
City of Detroit Receiving Hospital *[3,4]	Detroit	L. Shaffer	70	4,949	...	..	3	7/1	12-18	145.57
Minneapolis General Hospital *[3,4]	Minneapolis	S. E. Sweitzer	351	6,981	8	3	2	1/1, 7/1	12-36	91.50
University Hospitals *[3,4]	Minneapolis	H. E. Michelson	149	5,174	7	5	2	7/1	12-36	91.50
Mayo Foundation [3]	Rochester, Minn	P. A. O'Leary	(See page 1354)				10	.....	12	.....
Ancker Hospital *[2]	St. Paul	J. F. Madden	193	1,424	3	2	1	Varies	12	.....
Barnard Free Skin and Cancer Hospital [3,4]	St. Louis	M. F. Engman Sr	48	10,677	...	..	1	1/1	12	25.00
Kings County Hospital *[1]	Brooklyn	E. A. Gauvain	650	16,013	21	3	1	7/1	12-24	100.00
Buffalo General Hospital *[2,4]	Buffalo	E. D. Osborne	73	3,860	...	..	1	4/1	12-36	25.00
Edward J. Meyer Memorial Hospital *[3,4]	Buffalo	E. D. Osborne	476	14,561	3	1	3	Varies	12-36	50.00
Bellevue Hospital, Div. III—N. Y. Univ. *[3,4]	New York City	F. O. Coombs	1,447[b]	32,666[b]	...	..	4	Varies	12	25.00
Columbia-Presbyterian Medical Center *[3,4]	New York City	J. G. Hopkins	.....	49,206	...	..	4	.....	12	.....
†Hospital for Joint Diseases *[1]	New York City		1,004	5,627	1	..	1	.....	12	40.00
Montefiore Hosp. for Chronic Diseases *[1,4]	New York City	F. Wise	17	.....	1	..	1	1/1, 7/1	12	50.00
New York City Hospital *[3,4]	New York City	A. B. Cannon	423	8,841	8	3	1	7/1	12	100.00
New York Hospital *[3,4]	New York City	G. M. Lewis	...	20,997	...	..	2	.....	12	.....
New York Post-Graduate Medical School and Hospital *[3]	New York City	G. M. MacKee	213	101,475	2	..	12	5/1, 9/1	12-24	.....
†St. Luke's Hospital *[3]	New York City	L. P. Barker	191	13,666	...	..	1	1/1	12	50.00
Duke Hospital *[3,4]	Durham, N. C.	J. L. Callaway	230	6,094	2	..	3	4/1	12	83.33
Cincinnati General Hospital *[3]	Cincinnati	H. L. Claassen	617	2,550	11	8	4	4/1	12-24	.....
Cleveland Clinic Foundation Hospital [1]	Cleveland	E. W. Netherton	136	15,386	3	1	3	1/1, 7/1	12-36	100.00
City Hospital *[2,4]	Cleveland	H. N. Cole	669	13,792	7	2	4	7/1	12	50.00
University Hospitals *[3,4]	Cleveland	H. N. Cole	.....	.....	...	..	2	4/1	12	.....
University of Oregon Medical School Hospitals and Clinics *[2,4]	Portland, Ore	L. B. Kingery	28	3,553	...	..	5	Varies	12-24	75.00
Graduate Hosp. of the Univ. of Penna. *[3]	Philadelphia	F. Weidman	109	10,759	...	..	2	.....	12	.....
Hospital of the Univ. of Pennsylvania *[3,4]	Philadelphia	D. M. Pillsburg	551	23,559	...	..	6	4/1	12-36	66.50
Jefferson Medical College Hospital *[2]	Philadelphia	F. C. Knowles	15	3,986	...	..	1	.....	12	.....
Skin and Cancer Hospital [2,4]	Philadelphia	A. Strickler	174	44,027	2	..	2	7/1	12-24	50.00
University of Pittsburgh Med. Center *[3,4]	Pittsburgh	W. H. Guy	1,326	5,305	4	2	1	10/1	12-36	.....
John Sealy Hospital *[3,4]	Galveston, Tex	C. N. Frazier	174	10,737	1	1	3	9/1	12-24	100.00
University of Virginia Hospital *[3,4]	Charlottesville, Va	D. C. Smith	286	10,252	3	3	7	1/1	12	25.00

Hospitals, 50; Assistant Residencies and Residencies, 146

6. MALIGNANT DISEASES

Grady Memorial Hospital *	Atlanta, Ga		400	.....	...	..	2	.....	12	.....
Michael Reese Hospital *[4]	Chicago	E. Uhlmann	.....	917	...	..	2	.....	12-36	.....
Massachusetts General Hospital *	Boston		.....	.....	...	..	1	.....	12	.....
New England Deaconess Hospital	Boston	L. S. McKittrick	1,624	6,728	60	30	2	6/1	12	$ 75.00
Pondville Hospital	Walpole, Mass	G. L. Parker	680	6,349	28	23	5	.....	12	150.00
Westfield State Sanatorium [4]	Westfield, Mass	F. S. Hopkins	385[b]	6,760[b]	17	14	3	.....	12-24	185.00
Wayne County General Hospital and Infirmary *[1]	Eloise, Mich	R. V. Walker	286	322	156	65	1	7/1	12	172.50
University Hospital *[4]	Minneapolis	O. H. Wangensteen	274	2,643	5	4	2	7/1	12-36	91.50
Barnard Free Skin and Cancer Hospital	St. Louis	W. E. Leighton	767	10,835	18	15	2	1/1	12-24	100.00
Jersey City Hospital *[4]	Jersey City, N. J	J. B. Faison	420	2,291	102	29	2	.....	12	.....
Brooklyn Cancer Institute [4]	Brooklyn	A. B. Friedmann	840	5,705	213	32	6	1/1	12	.....
State Institute for the Study of Malignant Diseases [4]	Buffalo		1,806	21,218	70	63	4	.....	12	.....
Meadowbrook Hospital *	Hempstead, N. Y	E. H. Coon	266	2,895	99	45	1	4/1	12	115.00
Memorial Hospital *[4]	New York City	C. P. Rhoads	5,314	76,507[b]	183	65	30	1/1, 7/1	12-36	.....
New York City Cancer Institute Hospital [4]	New York City	L. Binder	634	4,768	499	45	8	4/1	12-24	120.00
Duke Hospital *[3]	Durham, N. C.		(Included in Surgery)				2	.....	12	.....
American Oncologic Hospital [4]	Philadelphia	G. M. Dorrance	581	6,117	34	24	3	4/1	12-36	150.00
Jeanes Hospital [4]	Philadelphia	A. E. Bothe	572	8,173	77	47	4	4/1	12-36	100.00

Hospitals, 18; Assistant Residencies and Residencies, 80

7. MEDICINE

The following services are approved by the Council and the American Board of Internal Medicine

United States Army.—Residencies available to medical officers, U. S. Army
Fitzsimons General Hospital * ..... Denver, Colo.

United States Navy.—Residencies available to medical officers, U. S. Navy
U. S. Naval Hospital * ..... Bethesda, Md. U. S. Naval Hospital * ..... Philadelphia

Jefferson and Hillman Hospitals *[4]	Birmingham, Ala	J. S. McLester	2,880	9,021	374	88	4	7/1	12-36	$ 50.00
Norwood Hospital *[4]	Birmingham, Ala	H. S. Ward and E. D. Lineberry	1,758	4,360	66	29	1	.....	24-36	100.00
Employees' Hospital of the Tennessee Coal, Iron and Railroad Company *	Fairfield, Ala		1,953	18,323	155	39	2	7/1	12-24	150.00
Baptist State Hospital *	Little Rock, Ark	F. W. Harris	2,588	.....	191	50	2	.....	12	.....
General Hospital of Fresno County *[4]	Fresno, Calif	W. E. R. Schottstaedt	1,490	5,424	286	70	2	7/1	12	135.00

Numerical and other references will be found on page 1354.

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7. MEDICINE—Continued

Name of Hospital	Location	Chief of Service	Inpatients Treated*	Outpatient Visits	Deaths	Autopsies	Asst. Res. and Residencies*	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Cedars of Lebanon Hospital *†	Los Angeles	M. Nathanson	2,592	6,758	297	111	1	4/1	12	$100.00
Los Angeles County Hospital *†	Los Angeles	H. F. West	15,612	34,392	2,398	765	18	4/1, 7/1	36	157.20
White Memorial Hospital *	Los Angeles	D. D. Comstock	2,249	26,331	...	..	2	4/1	12	31.00
Highland-Alameda County Hospital *†	Oakland, Calif	G. MacLean	1,952	.....	424	70	3	11/1	12-36	165.00
†Samuel Merritt Hospital	Oakland, Calif	G. MacLean and F. B. Taylor	1,363	.....	131	4	1	7/1	12-24	75.00
Collis P. and Howard Huntington Memorial Hospital *	Pasadena, Calif	E. C. Rosenow Jr.	2,231	13,105	224	115	1	7/1	12	150.00
San Diego County General Hospital *	San Diego	C. L. Stealy	5,181	13,266	599	151	2	4/1	12	164.00
Children's Hospital *†	San Francisco	D. Atkinson	.....	.....	...	..	1	.....	12	.....
Franklin Hospital *†	San Francisco	H. C. Shepardson	1,202	5,540	103	38	3	7/1	12	100.00
Mount Zion Hospital *†	San Francisco	A. L. Cohn and J. J. Sampson	1,589	.....	162	70	3	7/1	12	75.00
St. Luke's Hospital *†	San Francisco	H. P. Hill	2,165	1,162	142	38	2	4/1	12	200.00
San Francisco Hospital *†	San Francisco	L. H. Briggs	3,333	.....	843	182	7	Varies	12	150.00
Stanford University Hospitals *†	San Francisco	A. L. Bloomfield	2,064	19,812	142	49	7	7/1	12-24	50.00
University of California Hospital *†	San Francisco	W. J. Kerr	1,942	2,008	83	58	6	Varies	12	65.00
Santa Clara County Hospital *	San Jose, Calif	P. Morton	.....	.....	...	..	5	.....	12-24	165.00
Fairmont Hospital of Alameda County *†	San Leandro, Calif	H. G. MacLean	1,428	.....	...	..	2	7/1	12-36	165.00
Colorado General Hospital *	Denver	J. J. Waring	1,866	18,162	163	127	2	1/1	12	.....
Denver General Hospital *	Denver	M. Katzman	1,941	2,677	385	72	2	4/1	12-24	50.00
†Corwin Hospital *	Pueblo, Colo	R. H. Finney	1,769	31,868	102	41	1	.....	12	.....
†Hartford Hospital *†	Hartford, Conn	J. E. Hutchison	4,694	2,556	337	139	6	4/1	12-36	50.00
Grace-New Haven Community Hospital										
Grace Unit *	New Haven, Conn	S. J. Goldberg	1,084	808	134	22	4	Varies	12-36	.....
New Haven Unit *	New Haven, Conn	F. G. Blake	2,480	21,198	...	..	7	4/1	12	*
†Hospital of St. Raphael *	New Haven, Conn	H. Lineuthal	1,762	.....	257	27	2	7/1	12-24	50.00
†Delaware Hospital *	Wilmington, Del	G. W. K. Forrest	2,672	.....	...	..	3	9/1	12-24	100.00
Memorial Hospital *†	Wilmington, Del	L. B. Flinn	986	2,148	106	29	1	7/1	12-24	125.00
Central Dispensary and Emergency Hosp.*†	Washington, D. C	H. M. Kaufman	1,536	2,615	216	48	2	4/1	12-15	50.00
Freedmen's Hospital *†	Washington, D. C	J. B. Johnson	865	9,941	191	93	9	7/1	12-36	50.00
Gallinger Municipal Hospital *†	Washington, D. C	W. M. Yater	2,590	513	463	241	10	3/1	12-24	65.00
Garfield Memorial Hospital *†	Washington, D. C	B. F. Weems	1,903	2,234	173	92	4	4/1	12	150.00
Georgetown University Hospital *	Washington, D. C	W. M. Yater	1,358	5,861	112	55	4	4/1	12-36	75.00
George Washington University Hospital *†	Washington, D. C	P. F. Dickens	729	3,406	35	13	3	.....	12	.....
Duval County Hospital *	Jacksonville, Fla	L. Limbaugh	453	.....	110	23	3	Varies	12	125.00
James M. Jackson Memorial Hospital *	Miami, Fla		4,400	.....	511	159	3	4/1	12	83.00
Grady Memorial Hospital *	Atlanta, Ga	E. A. Stead	2,443	41,981	420	133	12	.....	12	.....
St. Joseph Infirmary *	Atlanta, Ga	J. H. Hines	1,250	745	76	19	2	6/1	12-36	100.00
University Hospital *†	Augusta, Ga	N. P. Sydenstricker	2,329	.....	220	31	6	7/1	12-24	35.00
Emory University Hospital *	Emory University, Ga	H. Wood	.....	.....	100	31	1	4/1	12	50.00
†Alexian Bros. Hospital *	Chicago	I. F. Volini	1,820	.....	172	60	4	Varies	12-24	.....
Cook County Hospital *†	Chicago	C. Maher	11,899	14,649	3,481	434	18	Varies	12-36	25.00
†Henrotin Hospital *†	Chicago	F. K. Hick	963	378	50	12	1	10/1	12-36	100.00
Illinois Masonic Hospital *†	Chicago	R. Hayes	1,626	.....	190	58	3	.....	12	150.00
Mercy Hospital-Loyola University Clinics *†	Chicago	F. C. Val Dez	2,467	18,756	153	66	2	4/1	12	50.00
Michael Reese Hospital *†	Chicago		2,810	14,880	269	108	5	.....	12-36	.....
Mount Sinai Hospital *†	Chicago		1,686	13,232	214	74	1	3/1	.....	100.00
Norwegian-American Hospital *	Chicago	A. E. Lebner	1,069	.....	113	26	1	1/1	12	150.00
Passavant Memorial Hospital *†	Chicago	L. J. Pollock	1,591	1,508	63	36	6	.....	12	.....
Presbyterian Hospital *	Chicago	R. C. Brown	3,539	16,872	170	91	4		12-36	50.00
Provident Hospital *†	Chicago	A. F. Connor	586	6,463	87	18	1	7/1	12	50.00
Research and Educational Hospitals *†	Chicago	R. W. Keeton	520	9,820	37	34	4	.....	12-36	55.00
St. Joseph's Hospital *†	Chicago	L. E. Hines	1,375	1,578	123	44	2	4/1	12	75.00
St. Luke's Hospital *†	Chicago	R. W. Keeton	2,067	1,678	181	101	8	7/1	12-36	50.00
University of Chicago Clinics *†	Chicago	G. F. Dick	1,884	39,015	96	68	11	Varies	12-36	25.00
Wesley Memorial Hospital *†	Chicago	P. S. Rhoads	2,396	.....	141	76	6	Varies	12-36	25.00
Evanston Hospital *	Evanston, Ill	L. D. Snorf	2,327	9,512	139	112	1	4/1	12-18	50.00
St. Francis Hospital *	Evanston, Ill	R. W. Keeton	2,770	.....	211	46	1	Varies	12	75.00
St. Francis Hospital *†	Peoria, Ill	M. M. Parker	2,304	12,472	283	74	2	7/1	12-24	150.00
Indianapolis City Hospital *†	Indianapolis	C. J. Clark	2,367	18,999	441	174	9	7/1	12-36	60.00
Indiana University Medical Center *†	Indianapolis	J. O. Ritchey	2,219	10,693	173	100	4	7/1	12-36	33.33
†Methodist Hospital *†	Indianapolis	J. O. Ritchey	2,704	.....	219	41	2	.....	12-24	180.00
University Hospitals *†	Iowa City, Ia	M. Smith	2,463	3,713	172	65	12	7/1	12	40.00
University of Kansas Hospitals *†	Kansas City, Kan	R. H. Major	1,493	19,397	86	46	5	5/1	12-36	50.00
Wesley Hospital *†	Wichita, Kan	G. F. Corrigan	2,500	.....	218	56	1	.....	12	.....
Louisville General Hospital *	Louisville, Ky	J. W. Moore	1,710	23,242	302	83	12	4/1	12-48	45.00
Charity Hospital of Louisiana *†	New Orleans		4,828	29,417	833	241	33	Varies	12-48	25.00
Touro Infirmary *	New Orleans	S. B. Nadler	3,957	4,016	174	78	4	7/1	12	75.50
†Maine General Hospital *	Portland, Me	E. R. Blaisdell	1,433	1,914	166	59	2	7/1	12-24	75.00
Baltimore City Hospitals *†	Baltimore	C. H. Boyd	1,870	.....	395	162	10	4/1	12	40.00
Church Home and Infirmary *†	Baltimore	Z. R. Morgan	528	715	47	27	2	4/1	12	50.00
Franklin Square Hospital *†	Baltimore	W. H. Smith	443	.....	50	9	2	.....	12	.....
Hospital for Women *†	Baltimore	W. Fort	436	2,583	28	10	2	4/1	12-15	50.00
Johns Hopkins Hospital *†	Baltimore	W. T. Longcope	4,459	52,477	308	181	19	4/1	12	.....
Maryland General Hospital *†	Baltimore	D. C. Streett	727	240	115	22	2	4/1	12-15	50.00
Mercy Hospital *	Baltimore	H. R. Peters	.....	.....	113	27	4	7/1	12	50.00
Provident Hospital and Free Dispensary *	Baltimore	E. B. Jarrett	426	305	...	..	2	7/1	12	75.00
St. Agnes' Hospital *†	Baltimore	N. Nitsch	929	166	106	24	1	.....	12	.....
St. Joseph's Hospital *	Baltimore	F. J. Geraghty	947	943	115	35	3	4/1	12-36	50.00
Sinai Hospital *†	Baltimore		1,430	4,819	167	86	3	7/1	12	35.00
South Baltimore General Hospital *	Baltimore	G. McLean	501	1,648	54	12	2	.....	12	.....
Union Memorial Hospital *†	Baltimore	W. Bartler	1,535	2,946	...	..	6	Varies	12	30.00
U. S. Marine Hospital *	Baltimore	J. F. van Ackeren	.....	.....	...	..	..	.....	.....	.....
University Hospital *†	Baltimore	T. P. Sprunt	1,605	3,993	198	82	4	4/1	12-15	50.00
West Baltimore General Hospital *†	Baltimore	D. Tenner	784	736	109	30	2	7/1	12	100.00
†Beverly Hospital *	Beverly, Mass		1,262	3,014	109	58	1	Varies	12-36	50.00
Beth Israel Hospital *	Boston	H. Lineuthal	1,584	6,836	157	..	2	4/1	12	41.66
Boston City Hospital *†	Boston	C. Phipps	11,910	36,542	1,917	670	21	.....	12	50.00
Joseph H. Pratt Diagnostic Hospital †	Boston	S. Proger	3,664	1,907	...	..	6	.....	12-18	83.33
Lahey Clinic †	Boston	L. M. Hurxthal	2,500	50,000	30	23	20	Varies	12-24	125.00
Massachusetts General Hospital *†	Boston		.....	.....	...	..	14	.....	12	.....
Massachusetts Memorial Hospitals *	Boston	C. S. Keefer	1,187	5,197	48	35	4	4/1	12	50.00
†New England Deaconess Hospital †	Boston	H. F. Root	1,895	.....	45	30	4	Varies	12-24	100.00
Peter Bent Brigham Hospital *	Boston	G. W. Thorn	2,013	30,000	206	156	9	4/1	12	41.66
†Cambridge Hospital *†	Cambridge, Mass	J. H. Townsend	2,380	6,621	143	51	1	4/1	12	75.00
†Salem Hospital *†	Salem, Mass	S. N. Gardner	1,698	1,999	241	48	1	.....	12	.....
†Memorial Hospital *†	Worcester, Mass	O. H. Stansfield	1,139	2,778	170	45	1	7/1	12-24	100.00
Worcester City Hospital *	Worcester, Mass	G. W. Haigh	1,649	4,132	306	60	2	4/1	12	50.00
University Hospital *†	Ann Arbor, Mich	C. C. Sturgis	2,571	13,798	170	105	22	Varies	12	101.00
Alexander Blain Hospital	Detroit	R. L. Fisher	475	21,021	23	14	1	.....	12-48	200.00

Numerical and other references will be found on page 1354.

7. MEDICINE—Continued

Name of Hospital	Location	Chief of Service	Inpatients Treated [a]	Outpatient Visits	Deaths	Autopsies	Asst. Res. and Residencies [a]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
City of Detroit Receiving Hospital [a]	Detroit	G. B. Myers	3,646	39,865	938	358	10	4/1	12-27	$145.57
Grace Hospital [a]	Detroit	L. T. Colvin	3,014	5,788	246	57	3	4/1	12-36	125.00
Harper Hospital [a]	Detroit	H. A. Freund	2,605	.....	....	..	7	.....	12	85.00
Henry Ford Hospital [a]	Detroit	F. J. Sladen	5,645	108,390	223	97	30	4/1	12-60	175.00
Mount Carmel Mercy Hospital [a]	Detroit	H. L. Smith	1,984	.....	227	55	1	1/1	12	125.00
Providence Hospital *	Detroit	R. Weyher	1,979	.....	239	145	1	.....	12	.....
St. Mary's Hospital *	Detroit	N. J. Wilson Sr.	1,760	1,801	126	97	3	Varies	12-24	150.00
Woman's Hospital [a]	Detroit	B. I. Johnstone	....	.....	....	..	1	4/1	12	.....
Wayne County General Hospital and Infirmary [a]	Eloise, Mich.	M. R. McQuiggan	8,028	32,336	306	251	13	7/1	12	172.50
Hurley Hospital *	Flint, Mich.	.....	2,246	.....	263	71	1	7/1	12	.....
Blodgett Memorial Hospital [a]	Grand Rapids, Mich.	J. B. Whinery	.....	.....	....	..	1	.....	12	175.00
Butterworth Hospital [a]	Grand Rapids, Mich.	C. V. Crane	1,127	.....	129	48	1	.....	12	.....
St. Mary's Hospital *	Duluth, Minn.	F. J. Hirschboeck	1,636	.....	120	99	1	.....	12	.....
Minneapolis General Hospital [a]	Minneapolis	G. Fahr	2,135	16,729	368	189	6	1/1, 7/1	12-36	91.50
University Hospitals [a]	Minneapolis	C. J. Watson	1,116	22,321	107	80	6	7/1	12-36	91.50
Mayo Foundation	Rochester, Minn.	R. M. Wilder	(See page 1354)				120	.....	12	.....
Ancker Hospital *	St. Paul	A. Hoff	1,480	10,417	249	176	8	4/1	12	91.50
Charles T. Miller Hospital *	St. Paul	E. T. F. Richards	3,198	16,995	...	..	2	4/1	12	.....
St. Louis County Hospital [a]	Clayton, Mo.	H. S. Liggett	1,169	15,971	153	81	5	4/1	12	60.00
Kansas City General Hospital *	Kansas City, Mo.	D. A. Williams	2,391	13,270	460	191	4	.....	12-36	75.00
Research Hospital [a]	Kansas City, Mo.	R. C. Davis	1,424	.....	137	39	2	Varies	12-27	100.00
St. Joseph Hospital *	Kansas City, Mo.	W. M. Ketcham	2,069[b]	.....	....	..	1	.....	12	75.00
St. Mary's Hospital [a]	Kansas City, Mo.	P. H. Owens	1,179	.....	114	58	1	Varies	12	.....
Barnes Hospital [a]	St. Louis	W. B. Wood	4,196	19,471	216	147	12	7/1	12-36	25.00
De Paul Hospital *	St. Louis	E. P. Buddy	1,602	509	175	50	2	1/1, 4/1	12-24	60.00
Homer G. Phillips Hospital [a]	St. Louis	H. Bulger	2,017	6,723	478	87	6	10/1	12	80.00
Jewish Hospital [a]	St. Louis	L. Sale	2,671	5,827	211	48	4	4/1	12-15	50.00
Missouri Baptist Hospital *	St. Louis	P. S. Wenzel	1,915	.....	....	..	2	4/1	12	70.00
St. Anthony's Hospital *	St. Louis	E. V. Powell	1,439	.....	128	42	1	7/1	12	50.00
St. John's Hospital *	St. Louis	C. H. Nellson	1,792	3,569	167	37	2	4/1	12-24	45.00
St. Louis City Hospital [a]	St. Louis	B. Taussig	3,554	6,020	806	320	8	4/1	12-36	80.00
St. Luke's Hospital *	St. Louis	A. B. Day	890	.....	....	..	1	7/1	12	75.00
St. Mary's Group of Hospitals *	St. Louis	R. A. Kinsella	2,803	34,628	261	116	9	.....	12-36	55.00
Creighton Memorial St. Joseph's Hosp. [a]	Omaha	A. J. Sachs	4,974	4,972	236	82	1	7/1	12-24	100.00
Jersey City Hospital [a]	Jersey City, N. J.	T. J. White	4,299	18,571	583	86	7	.....	12	.....
Albany Hospital [a]	Albany, N. Y.	L. W. Gorham	2,055	4,958	193	102	4	4/1, 7/1	12	25.00
Brooklyn Hospital [a]	Brooklyn	E. P. Maynard Jr.	2,031	16,268	139	34	2	4/1	12-15	85.00
Coney Island Hospital [a]	Brooklyn	T. J. Longo	1,426	23,122	305	42	2	4/1	12	70.00
Cumberland Hospital [a]	Brooklyn	J. J. Guttman	1,957	24,773	313	75	2	4/1	12	120.00
Greenpoint Hospital [a]	Brooklyn	A. Klein	1,154	9,341	219	35	2	4/1	12	120.00
Jewish Hospital [a]	Brooklyn	.....	1,374	24,097	165	43	4	4/1, 10/1	12	25.00
Kings County Hospital [a]	Brooklyn	J. Crawford and H. Feinblatt	13,156	18,716	2,568	281	8	7/1	12-24	25.00
Long Island College Hospital [a]	Brooklyn	W. Dock	1,547	9,260	132	47	6	4/1	12-24	25.00
†Methodist Hospital *	Brooklyn	A. T. Mays	1,968	8,752	191	16	2	4/1	12	.....
Norwegian Lutheran Deaconesses' Home and Hospital [a]	Brooklyn	.....	1,986[b]	241[b]	...	..	1	.....	12	.....
Buffalo General Hospital *	Buffalo	B. D. Bowen	2,252	13,356	235	105	8	4/1	12-36	25.00
Edward J. Meyer Memorial Hospital [a]	Buffalo	D. K. Miller	3,020	8,751	428	178	9	Varies	12-48	59.00
Millard Fillmore Hospital *	Buffalo	D. McKay	1,276	.....	164	46	1	4/1	12-48	50.00
Mary Imogene Bassett Hospital [a]	Cooperstown, N. Y.	G. M. Mackenzie	.....	.....	...	..	1	10/1	12	.....
Meadowbrook Hospital *	Hempstead, N. Y.	E. C. Jessup	873	.....	123	50	1	4/1	12	115.00
Queens General Hospital [a]	Jamaica, N. Y.	A. W. Victor	3,191	10,403	791	262	2	10/1	12	70.00
Charles S. Wilson Memorial Hospital [a]	Johnson City, N. Y.	J. Colella	1,989	.....	167	40	1	7/1	12-36	200.00
New Rochelle Hospital *	New Rochelle, N. Y.	C. A. Read	1,821	1,294	228	53	1	3/1	12	125.00
Bellevue Hospital, Div. I—Columbia U. [a]	New York City	I. G. Woodruff	2,646	20,548[b]	266[b]	93[b]	1	Varies	12	100.00
Bellevue Hospital, Div. II—Cornell U. [a]	New York City	A. Lindsay	2,502[b]	35,315[b]	234[b]	107[b]	1	Varies	12	100.00
Bellevue Hospital, Div. III—N. Y. Univ. [a]	New York City	W. Tellit	3,328[b]	13,755[b]	386[b]	115[b]	2[a]	Varies	12	100.00
Bellevue Hospital, Div. IV—Open Div. [a]	New York City	C. Nammack	2,489[b]	15,530[b]	190[b]	85[b]	1	Varies	12	100.00
†Beth Israel Hospital [a]	New York City	J. J. Hertz	945	23,476	120	28	1	4/1	12-24	50.00
Bronx Hospital *	New York City	H. Wessler	1,236	4,481	148	17	2	4/1	12-24	75.00
Flower and Fifth Avenue Hospitals [a]	New York City	L. J. Boyd	1,036	7,801	97	..	4	7/1	12	50.00
Fordham Hospital [a]	New York City	J. J. McGowan	.....	.....	...	..	2	4/1	12	70.00
Goldwater Memorial Hospital [a]	New York City	D. Seegal, T. McGoldrick and J. W. Shannon	1,842	1,389	299	125	23	4/1	12	50.00
Gouverneur Hospital [a]	New York City	J. P. Croce	1,138	44,240	256	32	3	4/1	12	50.00
Harlem Hospital [a]	New York City	O. La Rotondo	.....	.....	....	..	6	4/1, 7/1	12	50.00
Lenox Hill Hospital [a]	New York City	.....	1,324	7,941	135	53	2	Varies	12	50.00
Lincoln Hospital [a]	New York City	L. H. Shearer	2,854	.....	611	..	4	.....	12	.....
Metropolitan Hospital [a]	New York City	L. J. Boyd	2,946	26 097	509	103	3	4/1	12	100.00
Montefiore Hospital for Chronic Diseases [a]	New York City	L. Leiter	.....	.....	101	62	4	1/1, 7/1	12	50.00
Morrisania City Hospital [a]	New York City	E. Flood and S. Biloon	3,619	6,301	755	83	2	4/1	12-15	50.00
Mount Sinai Hospital [a]	New York City	.....	.....	.....	....	..	7	1/1, 7/1	18	50.00
New York City Hospital [a]	New York City	J. H. Cudmore and M. A. Ramirez	2,413	21,972	443	156	4	7/1	12	50.00
New York Hospital [a]	New York City	D. P. Barr	1,760	43,751	111	67	20	4/1	12-60	25.00
New York Infirmary for Women and Children [a]	New York City	M. Manter	304	2,086	9	4	1	9/1	12	75.00
New York Polyclinic Medical School and Hospital [a]	New York City	.....	982	5,763	63	14	2	4/1	12	25.00
New York Post-Graduate Medical School and Hospital [a]	New York City	W. G. Lough	1,671	31,778	89	48	5	4/1, 7/1	12	30.00
Presbyterian Hospital [a]	New York City	W. W. Palmer	3,997	46,975	249	..	15	.....	12	41.67
Roosevelt Hospital [a]	New York City	H. F. Shattuck and H. C. Thacher	2,256	8,338	300	80	4	.....	12-24	86.66
St. Luke's Hospital *	New York City	G. M. Goodwin	2,691	11,122	256	77	3	7/1	12-36	50.00
St. Vincent's Hospital [a]	New York City	F. W. Baldwin	2,969	7,690	409	129	4	4/1	12-36	50.00
Genesee Hospital [a]	Rochester, N. Y.	D. B. Jewett	1,230	.....	144	47	2	.....	12	.....
Rochester General Hospital [a]	Rochester, N. Y.	L. P. Thomas	4,687	3,662	171	114	2	7/1	12-36	60.00
St. Mary's Hospital [a]	Rochester, N. Y.	B. J. Duffy	3,226	3,817	224	74	1	4/1	12	.....
Strong Memorial and Rochester Municipal Hospitals [a]	Rochester, N. Y.	W. S. McCann	3,774	18,554	377	272	13	7/1	12-48	41.66
Hospital of the Good Shepherd *	Syracuse, N. Y.	E. C. Reifenstein	.....	.....	....	..	2	.....	12	.....
Grasslands Hospital [a]	Valhalla, N. Y.	M. D. Touart	757	2,739	171	96	2	4/1	12-24	75.00
Charlotte Memorial Hospital [a]	Charlotte, N. C.	R. F. Leinbach	1,466	1,593	94	39	2	.....	12-36	.....
Duke Hospital [a]	Durham, N. C.	F. M. Hanes	3,497	34,762	116	63	13	4/1	12	83.33
Watts Hospital *	Durham, N. C.	W. R. Stanford	2,546	2,646	110	29	1	4/1	16	100.00
City Hospital *	Winston-Salem, N. C.	S. F. Pfohl	1,753	4,801	198	35	4	.....	12	75.00
North Carolina Baptist Hospital [a]	Winston-Salem, N. C.	G. T. Harrell	1,582	5,856	85	42	4	7/1	12	41.66
Trinity Hospital *	Minot, N. D.	.....	....	.....	....	..	1	.....	12	.....

Numerical and other references will be found on page 1354.

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7. MEDICINE—Continued

Name of Hospital	Location	Chief of Service	Inpatients Treated *	Outpatient Visits	Deaths	Autopsies	Asst. Res. and Residencies *	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
City Hospital *	Akron, O.		3,074	.....	297	66	2	.....	12	$100.00
†Aultman Hospital *¹	Canton, Ohio	R. T. Warburton	2,355	.....	181	47	4	7/1	12-36	100.00
Mercy Hospital *	Canton, O.	J. D. O'Brien	1,828	.....	155	23	1	.....	12	.....
Christ Hospital *	Cincinnati	D. A. Tucker	1,837	3,009	140	49	2	4/1	12-36	75.00
Cincinnati General Hospital *²	Cincinnati	M. A. Blankenhorn	3,705	24,865	673	265	26	4/1	12-36	.....
Deaconess Hospital *¹	Cincinnati		2,646	.....	140	37	1	4/1	12	125.00
Good Samaritan Hospital *	Cincinnati	G. Topmoeller	4,502	1,845	280	63	3	7/1	12-36	105.00
Jewish Hospital *²	Cincinnati	R. Rothenberg	4,177	.....	186	68	5	4/1	12-48	.....
City Hospital *²	Cleveland	R. W. Scott	1,743	20,234	442	161	16	7/1	12	50.00
Cleveland Clinic Foundation Hospital *	Cleveland	R. L. Hadley	1,217	75,110	90	30	37	1/1, 7/1	12-36	100.00
Mount Sinai Hospital *¹	Cleveland	H. S. Applebaum	1,251	7,829	138	68	2	4/1	12	100.00
St. Alexis Hospital *	Cleveland	H. V. Paryzek	2,362	3,734	213	90	1	4/1	12	75.00
St. John's Hospital *	Cleveland	W. J. Fornes	1,499	.....	138	38	1	4/1	12	100.00
St. Luke's Hospital *	Cleveland	L. Taylor	2,369	12,274	207	97	3	4/1	12-36	50.00
St. Vincent's Charity Hospital *	Cleveland	C. S. Stone	1,975	8,089	181	38	1	.....	12	75.00
University Hospitals *²	Cleveland	J. T. Wearn	.....	.....	...	...	17	4/1	12	.....
St. Francis Hospital *	Columbus, O.	L. H. Van Buskirk	1,026	522b	153	34	1	.....	12	.....
Starling-Loving University Hospital *²	Columbus, O.	B. K. Wiseman	1,260	9,235	224	101	7	4/1	12-18	50.00
White Cross Hospital *	Columbus, O.	W. F. Milbon	2,762	.....	196	55	1	4/1	12-24	100.00
Miami Valley Hospital *	Dayton, O.	W. E. Prugh	2,238	863	281	91	2	.....	12	.....
Huron Road Hospital *¹	East Cleveland, O.	A. B. Schneider	932	2,059	100	41	3	7/1	12-24	80.00
Maumee Valley Hospital *	Toledo, O.	N. Morris	1,999	9,356	283	57	1	.....	12	.....
St. Vincent's Hospital *²	Toledo, O.	C. W. Waggoner	2,468	2,811	205	36	2	.....	12	.....
Toledo Hospital *¹	Toledo, Ohio	J. L. Stifel	2,416	982	247	74	2	1/1	12	100.00
St. Elizabeth's Hospital *²	Youngstown, O.	R. B. Poling	2,567	798	240	50	2	4/1	12-24	105.00
Youngstown Hospital *	Youngstown, O.	W. H. Bunn	5,600	697	379	51	2	4/1	12	125.00
St. Anthony Hospital *	Oklahoma City	P. M. McNeill	1,772	.....	...	..	1	.....	12	.....
University Hospitals *	Oklahoma City	W. Langston	899	10,214	110	31	2	4/1	12-18	75.00
†Emanuel Hospital *¹	Portland, Ore.	A. L. Beverelde	1,502	.....	137	59	2	Varies	12	100.00
Good Samaritan Hospital *¹	Portland, Ore.	C. P. Wilson	3,696		213	89	1	4/1	12	75.00
University of Oregon Medical School Hospitals and Clinics *¹	Portland, Ore.	L. Selling	1,833	18,881	366	136	4	Varies	12-36	75.00
Abington Memorial Hospital *	Abington, Pa.	J. T. Beardwood	1,421	2,008	155	31	2	4/1	12-24	50.00
Bryn Mawr Hospital *	Bryn Mawr, Pa.		620		67	25	2	4/1	12	150.00
George F. Geisinger Memorial Hospital *¹	Danville, Pa.	W. J. Stainsby	1,842	16,239	124	42	2	7/1	12-24	75.00
Germantown Dispensary and Hospital *	Philadelphia	S. Bradbury and C. C. Watt Jr.	1,549	15,622	143	56	1	7/1	12-24	50.00
Graduate Hospital of the University of Pennsylvania *	Philadelphia	G. M. Piersol	693	8,330	65	28•	2	7/1	12-24	. ....
Hahnemann Hospital *¹	Philadelphia	G. H. Wells	1,776	7,838	303	135	2	9/1	12-24	50.00
†Hospital of the Protestant Episcopal Church *	Philadelphia	J. H. Arnett	1,147	6,177	169	59	1	4/1	12	50.00
Hospital of the University of Penna.*¹	Philadelphia	O. H. P. Pepper	2,739	20,167	157	85	7	4/1	12-36	24.50
Hospital of the Woman's Med. College *¹	Philadelphia	W. G. Leaman Jr.	462	3,563	36	13	1	....	12	.....
Jefferson Medical College Hospital *	Philadelphia	H. A. Reiman	2,688	10,200	...	..	3	.....	12	.....
Jewish Hospital *¹	Philadelphia		1,736	.....	228	99	2	4/1	12	75.00
Mount Sinai Hospital *¹	Philadelphia	A. I. Rubenstone and A. Trasoff	1,528	9,641	137	67	2	4/1	12-24	100.00
Pennsylvania Hospital *	Philadelphia	D. L. Farley and G. G. Duncan.	1,706	6 818	220	72	3	4/1	12-36	20.00
Philadelphia General Hospital *¹	Philadelphia		4,794	.....	1,152	..	3	4/1, 7/1	12-36	70.00
Presbyterian Hospital *¹	Philadelphia	T. Klein	1,566	8,242	327	172	2	7/1	12	50.00
Temple University Hospital *¹	Philadelphia	C. L. Brown	1,712	10,208	121	40	6	.....	12-36	50.00
Woman's Hospital *¹	Philadelphia		467	.....	..	..	2	4/1	12	50.00
Allegheny General Hospital *	Pittsburgh	E. W. Willetts	1,444	6,126	194	32	2	4/1	12-15	100.00
Elizabeth Steel Magee Hospital *	Pittsburgh	J. D. Heard	1,323	...	97	20	2	4/1	12-36	83.33
Mercy Hospital *²	Pittsburgh	W. W. Maclachlan	2,171	4,076	184	23	2	4/1	12-36	.....
Montefiore Hospital *¹	Pittsburgh	L. H. Criep	1,155	5,701	168	57	3	4/1	12	50.00
Presbyterian Hospital *²	Pittsburgh	A. H. Colwell	1,743	.....	138	43	3	4/1	12-36	33.00
St. Francis Hospital *	Pittsburgh	A. W. Sherrill and F. B. Utley	1,512	1,529	190	36	3	4/1	12-36	80.00
Western Pennsylvania Hospital *¹	Pittsburgh	F. A. Evans	2,742	2,735	296	64	2	7/1	12	.....
Reading Hospital *¹	Reading, Pa.	W. S. Bertolet	.....	.....	237	109	1	7/1	12	125.00
Robert Packer Hospital *	Sayre, Pa.	S. D. Conklin	2,439	.....	149	55	3	.....	12	.....
†Rhode Island Hospital *	Providence, R. I.	E. S. Wing and A. M. Burgess	2,851	14,468	502	188	4	Varies	12-36	50.00
Roper Hospital *	Charleston, S. C.	W. H. Kelley	2,395	4,637	218	78	4	7/1	12-48	50.00
John Gaston Hospital *	Memphis, Tenn.	C. H. Sanford	2,208	15,498	395	187	3	.....	12	....
George W. Hubbard Hospital *	Nashville, Tenn.	E. T. Odom	937	3,111	79	22	1	7/1	12	75.00
Nashville General Hospital *	Nashville, Tenn.		1,061	13,650	154	32	4	4/1, 7/1	12	100.00
St. Thomas Hospital *	Nashville, Tenn.	W. R. Cate	1,258	...	108	40	2	7/1	12	125.00
Vanderbilt University Hospital *¹	Nashville, Tenn.	H. J. Morgan	1,839	22,954	93	50	5	4/1	12	.....
Baylor University Hospital *¹	Dallas, Tex.	H. M. Winans	1,936	1,670	139	41	2	.....	12-24	50.00
†Methodist Hospital *	Dallas, Tex.	H. Donald	1,376	1,796	98	16	1	4/1	12	50.00
Parkland Hospital *	Dallas, Tex.	T. Harrison	.....	.....	...	6	.....	.....	12	50.00
†St. Paul's Hospital *	Dallas, Tex.		2,985	1,917	324	65	2	7/1	12-36	25.00
John Sealy Hospital *¹	Galveston, Tex.	C. T. Stone	1,375	11,938	154	90	9	.....	12	.....
Hermann Hospital *²	Houston, Tex.	F. R. Lummis	1,631	3,704	115	50	3	.....	12	...
Jefferson Davis Hospital *²	Houston, Tex.	H. Caplovitz	2,503	9,879	407	49	3	7/1	12	50.00
Southern Pacific Hospital *	Houston, Tex.	M. D. Levy	983	10,367	13	4	2	.....	12-24	125.00
Scott and White Hospital *¹	Temple, Tex.	V. M. Longmire	2,028	.....	48	18	6	Varies	12..	150.00
†Dr. W. H. Groves Latter-Day Saints Hospital *¹	Salt Lake City	L. E. Viko	3,026	.....	235	90	1	7/1	12	100.00
Salt Lake County General Hospital *¹	Salt Lake City	M. M. Wintrobe	....	14,771	152	88	6	7/1	12-36	50.00
Mary Fletcher Hospital *¹	Burlington, Vt.	E. L. Amidon	1,347	371	77	40	2	7/1	12	150.00
†Alexandria Hospital *¹	Alexandria, Va.	H. L. Latane	1,372	.....	121	40	2	7/1	12-24	87.50
University of Virginia Hospital *²	Charlottesville, Va.	H. B. Mulholland	2,538	9,344	136	43	13	.....	12	.....
Chesapeake and Ohio Hospital *	Clifton, Forge, Va.	G. S. Hartley	1,999	4,024	77	32	1	4/1	.....	60.00
Norfolk General Hospital *¹	Norfolk, Va.	W. B. Newcomb	2,912	845	174	42	1	4/1	12	100.00
†Johnston-Willis Hospital *¹	Richmond, Va.	J. M. Hutcheson	881	.....	59	32	1	4/1	12 •	100.00
Medical College of Virginia Hosp. Div.*¹	Richmond, Va.	W. B. Porter	2,313	10,787	193	79	7	4/1	12	37.50
King County Hospital *	Seattle, Wash.		3,841b	5,755b	878b	228b	3	.....	12	125.00
†Swedish Hospital *	Seattle, Wash.	E. G. Bannick	1,380	....	109	29	1	4/1	12	50.00
Virginia Mason Hospital *	Seattle, Wash.	L. J. Palmer	1,807	.....	164	61	4	4/1, 7/1	12	100.00
Chesapeake and Ohio Hospital *	Huntington, W. Va.	W. E. Vest	.....	.....	...	..	1	.....	12	.....
St. Mary's Hospital *	Huntington, W. Va.	W. C. Swann	1,831	.....	214	59	1	4/1	12	100.00
State of Wisconsin General Hospital *¹	Madison, Wis.	J. S. Evans	3,413	23,402	127	60	9	7/1	12-36	25.00
Columbia Hospital *	Milwaukee	J. J. Pink	814	....	80	34	1	1/1	12-48	50.00
Milwaukee County Hospital *¹	Milwaukee	F. D. Murphy	7,066	13,453	786	208	15	4/1	12-36	68.22
St. Joseph's Hospital *	Milwaukee	R. E. Fitzgerald	2,454	.....	274	53	1	4/1	12-24	100.00
Queens Hospital *¹	Honolulu, Hawaii	H. Arnold Sr.	2,674	.....	203	103	1	1/1	12-24	150.00

Hospitals, 280; Assistant Residencies and Residencies, 1,373

Numerical and other references will be found on page 1354.

8. MIXED

In addition to the hospitals listed below, all hospitals approved for intern training (798) are likewise accredited for mixed residencies

Name of Hospital	Location	Chief of Service	Inpatients Treated*	Deaths	Autopsies	Asst. Res. and Residencies*	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Baptist Hospitals	Birmingham, Ala.	S. D. Motley	7,691	171	33	5	7/1	12	$150.00
St. Vincent's Hospital	Birmingham, Ala.	S. S. Underwood	4,825	99	23	4	.....	12	. ...
St. Margaret's Hospital	Montgomery, Ala.	J. H. Blue	6,147	244	40	3	1/1, 7/1	12	125.00
St. Mary's Hospital and Sanatorium	Tucson, Ariz.	R. W. Rudolph.	6,197	141	30	2	4/1	12	150.00
Leo N. Levi Memorial Hospital	Hot Springs, Ark.	D. C. Lee	1,026	24	12	2	6/1	12-24	250.00
Kern General Hospital	Bakersfield, Calif.	R. A. Patrick	7,636	598	237	18	4/1	12	325.00
Paradise Valley Sanitarium and Hospital	National City, Calif.	A .R. Stadin	4,113	114	28	3	.....	12	. ...
Monterey County Hospital	Salinas, Calif.	J. C. Sharp	1,903	133	40	4	4/1	12-24	150.00
St. Helena Sanitarium and Hospital	Sanitarium, Calif.	G. K. Abbott	3,557	63	9	2	.....	12	. ..
Sonoma County Hospital*	Santa Rosa, Calif.	W. E. Rogers	3,161	281	91	7	4/1	12	150.00
Boulder-Colorado Sanitarium and Hosp.	Boulder, Colo.	R. T. Smith	1,852	48	15	1	.....	12	.....
Memorial Hospital*	Colorado Spgs., Colo.	I. H. Schwab	2,962	100	7	2	3/1, 7/1	12	150.00
St. Francis Hospital and Sanatorium	Colorado Spgs., Colo.	G. W. Bancroft	2,494	93	19	2	4/1	12	200.00
St. Mary Hospital	Pueblo, Colo.	J. Snedec	3,337	162	4	2	.....	12	....
Bristol Hospital	Bristol, Conn	R. A. Richardson	4,414	124	15	2	.....	12	. ...
Greenwich Hospital*	Greenwich, Conn.	J. A. McCreery	2,915	84	56	4	4/1	12	.....
Riverside Hospital*	Jacksonville, Fla.	T. Z. Cason	1,579	54	10	1	.....	12	.....
Alton Memorial Hospital	Alton, Ill.	J. E. Walton	4,353	124	28	1	.....	12	130.00
St. Joseph's Hospital	Alton, Ill.	J. M. McDonald	4,881	132	55	3	.....	12	150.00
MacNeal Memorial Hospital*	Berwyn, Ill.	J. A. Gardiner	6,350	189	63	4	.....	12	....
St. Francis Hospital	Blue Island, Ill.	F. Lally	3,970	102	24	3	.....	12	225.00
St. Anthony's Hospital	Rock Island, Ill.	M. L. Ostrom	4,024	182	33	2	.....	12	.....
Victory Memorial Hospital	Waukegan, Ill.	K. C. Beck	3,469	126	25	1	.....	12	. ...
Clinic Hospital	Bluffton, Ind.	H. D. Caylor	2,058	44	21	2	.....	12	100.00
Protestant Deaconess Hospital	Evansville, Ind.	V. V. Schriefer	9,166	328	38	1	.....	12	.....
St. Mary's Hospital	Evansville, Ind.	G. Willison	4,522	181	25	2	.....	12	200.00
Lafayette Home Hospital*	Lafayette, Ind.	H. E. Klepinger	3,982	131	6	3	.....	12	200.00
St. Luke's Methodist Hospital	Cedar Rapids, Iowa	F. W. Mulsow	6,024	228	20	2	.....	12	175.00
Jewish Hospital	Louisville, Ky.	M. M. Weiss	3,479	141	17	2	4/1	12	150.00
E. A. Conway Memorial Hospital*	Monroe, La.	F. C. Bennett	5,639	224	32	6	.....	12	. ...
Suburban Hospital	Bethesda, Md	E. Stieglitz	3,173	130	32	3	7/1	12	100.00
Long Island Hospital	Boston	R. I. Smith	668	124	20	11	Varies	12	208.33
St. Anne's Hospital	Fall River, Mass.	E. E. Hussey	3,476	62	33	3	7/1	12	60.00
Framingham Union Hospital	Framingham, Mass.	H. Folsom	2,362	98	21	2	1/1, 7/1	12	75.00
Malden Hospital	Malden, Mass.	R. Daffinee	5,172	149	24	3	.....	12	....
Tewksbury State Hospital and Infirmary	Tewksbury, Mass.	C. W. Houghton	1,289	343	28	7	.....	12	.. ..
Parkside Hospital	Detroit	S. H. C. Owen	1,361	38	6	3	.....	12	. .
Saratoga General Hospital	Detroit	J. V. Lammy	4,530	112	18	3	.....	12	.....
Cottage Hospital	Grosse Point, Mich.	H. Stalker	2,456	53	17	1	7/1	12	200.00
Mercy Hospital	Muskegon, Mich.	E. S. Thornton	6,891	64	46	2	.....	12	.....
St. Joseph Mercy Hospital*	Pontiac, Mich.	E. A. Christie	9,260	181	23	6	.....	12	.....
Wyandotte General Hospital*	Wyandotte, Mich.	S. L. Hileman	6,101	190	68	5	7/1	12	250.00
Hibbing General Hospital	Hibbing, Minn.	L. W. Morsman	4,234	112	97	2	.....	12	.....
Eitel Hospital	Minneapolis	W. R. Jones	4,405	129	31	2	1/1	12	100.00
Fairview Hospital*	Minneapolis	J. Moe	6,623	182	50	3	3/1	12	200.00
Lutheran Deaconess Home and Hospital	Minneapolis	H. Ulrich	5,367	159	44	1	.....	12	.....
Midway Hospital	St. Paul	G. Earl	4,447	130	38	2	.....	12	.....
Northern Pacific Beneficial Assn. Hosp.	St. Paul	B. I. Deraut	4,411	103	5	2	7/1	12	.....
Alexian Brothers Hospital	St. Louis	E. Sassin	2,303	127	57	2	4/1	12	200.00
Douglas County Hospital	Omaha	L. Boler	1,546	275	38	3	.....	12	.....
Elliot Hospital*	Manchester, N. H.	G. F. Dwinell	2,997	83	59	2	4/1	12	75.00
Sacred Heart Hospital	Manchester, N. H.	G. L. Bastian	2,896	180	28	2	.....	12-24	.....
Auburn City Hospital*	Auburn, N. Y.	R. F. Johnson	7,005	230	36	4	1/1	12	75.00
Jewish Sanitarium and Hospital for Chronic Diseases*	Brooklyn		159	108	22	5	1/1, 7/1	12-18	125.00
St. Joseph Hospital	Far Rockaway, N. Y.	A. B. Johnson	2,542	92	21	2	.....	12	....
Kingston Hospital	Kingston, N. Y.	G. W. Ross	2,904	231	35	2	7/1	12	100.00
Beekman-Downtown Hospital*	New York City	R. H. Kennedy	1,770	98	33	2	7/1, 10/1	12	100.00
Richmond Memorial Hospital	Staten Island, N. Y.	D. V. Catalano	1,747	88	13	4	.....	12	....
Wyoming County Community Hospital	Warsaw, N. Y.	H. S. Martin	2,699	148	25	4	5/1	12	75.00
Mercy Hospital	Charlotte, N. C.	B. K. Blalock	5,714	166	17	3	.....	12	....
Highsmith Hospital	Fayetteville, N. C.	J. F. Highsmith Jr.	4,725	189	8	3	.....	12	....
Park View Hospital	Rocky Mount, N. C.	E. S. Boice	5,516	130	6	3	7/1	12	100.00
St. John's Hospital*	Fargo, N. D.	W. H. Long	6,575	160	26	3	.....	12	.....
Glenville Hospital*	Cleveland	J. P. Anderson	3,380	111	34	2	4/1	12	150.00
Grace Hospital	Cleveland	A. E. Biddinger	2,432	38	16	2	.....	12	.....
Woman's Hospital*	Cleveland	N. L. Zinner	4,065	111	35	4	4/1	12	125.00
Mansfield General Hospital*	Mansfield, Ohio	W. E. Wygant	5,116	209	29	1	4/1	12	150.00
Doctors Hospital	Philadelphia	A. P. Keegan	3,903	121	12	2	.....	12	.....
Medical Arts Hospital	Dallas, Tex.	M. O. Rouse	5,045	93	8	2	.....	12	.....
All Saints Hospital	Fort Worth, Tex.	A. E. Jackson	4,286	131	20	3	1/1, 5/1	12	150.00
St. Mary's Infirmary	Galveston, Tex.	N. Prujansky	4,454	97	9	2	4/1	12	.....
Elizabeth Buxton Hospital	Newport News, Va.	E. Greenspon	6,947	210	71	3	4/1	12	150.00
Riverside Hospital	Newport News, Va.	P. L. Carleton	5,331	145	15	3	.....	12	150.00
Grace Hospital	Richmond, Va.	A. L. Herring	4,026	86	10	2	.....	12	.....
Retreat for the Sick	Richmond, Va.	A. S. Brinkley	2,805	113	32	3	. ...	12	.....
St. Elizabeth's Hospital	Richmond, Va.	J. S. Horsley	1,618	59	47	2	.....	12-15	125.00
St. Luke's Hospital	Richmond, Va.	T. E. Hughes	2,810	106	34	1	7/1	12	75.00
Sheltering Arms Hospital*	Richmond, Va.	W. Bickers	1,040	27	8	2	5/1	12	100.00
Maynard Hospital	Seattle, Wash.	W. A. Glasgow	3,650	94	41	2	4/1	12	200.00
McMillan Hospital	Charleston, W. Va.	W. O. McMillan	3,457	39	18	2	4/1	12-18	200.00
St. Francis Hospital	Charleston, W. Va.	C. B. Smith	5,699	70	7	4	4/15	12	150.00
St. Mary's Hospital	Clarksburg, W. Va.	H. H. Haynes	4,855	79	11	2	.....	12	.....
Fairmont General Hospital	Fairmont, W. Va.	G. H. Traugh	4,887	145	11	1	.....	12	.....
Camden-Clark Memorial Hospital	Parkersburg, W. Va.	R. H. Boice	5,138	209	44	2	.....	12	.....
Mercy Hospital	Janesville, Wis.	H. C. Danforth	3,409	206	14	2	7/1	12	100.00
La Crosse Lutheran Hospital	La Crosse, Wis.	J. C. Harmon	4,130	125	48	1	.....	12	150.00
St. Mary's Hospital	Superior, Wis.	T. J. Doyle	3,036	234	28	1	.....	12	.....

Hospitals, 87; Assistant Residencies and Residencies, 251

Numerical and other references will be found on page 1354.

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9. NEUROLOGY

The following services are approved by the Council and the American Board of Psychiatry and Neurology
(See footnotes 1, 2 and 3)

Name of Hospital	Location	Chief of Service	Inpatients Treated*	Outpatient Visits	Deaths	Autopsies	Asst. Res. and Residencies*	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Los Angeles County Hospital ★[2,4]	Los Angeles	S. D. Ingham	1,791	818	597	183	2	4/1, 7/1	24	$157.20
Gallinger Municipal Hospital ★[2,4]	Washington, D. C.		623	.....	30	12	1	3/1	12	50.00
George Washington University Hospital ★[2]	Washington, D. C.	W. Freeman	48	311	..	..	2	.....	12	.....
†Cook County Hospital ★[1]	Chicago	L. W. Avery	665	1,840	139	15	6	1/1, 7/1	12-36	25.00
St. Luke's Hospital ★[2]	Chicago	A. P. Solomon	238	337	4	2	2	7/1	12-36	25.00
University of Chicago Clinics ★[2]	Chicago	R. B. Richter	164	2,434	2	2	2	....	12	25.00
University Hospitals ★[2,4]	Iowa City, Ia	A. L. Sahs	1,146	752	30	17	3	7/1	12	40.00
Charity Hospital of Louisiana ★[2,4]	New Orleans		868	.....	81	25	10	Varies	12-36	25.00
Baltimore City Hospital ★[2]	Baltimore	F. Ford	.....	.....	...	..	2	4/1	12	60.00
Boston City Hospital ★[2,4]	Boston	R. D. Adams	384	4,809	26	8	10	.. . .	12	50.00
Massachusetts General Hospital ★[2]	Boston		.....	.....	.	.	1	... . .	12	.....
University Hospital ★[2,4]	Ann Arbor, Mich	C. D. Camp	535	4,515	26	12	2	....	24	101.00
Henry Ford Hospital [1,4]	Detroit	T. J. Heldt	(See Psychiatry)				2	4/1	18-36	175.00
Wayne County General Hospital and Infirmary ★[1,4]	Eloise, Mich	R. T. Costell	1,130	2,511	34	14	2	7/1	12	172.50
†University Hospitals ★[1]	Minneapolis		390	2,791	27	18	1	7/1	36	91.50
Mayo Foundation [3]	Rochester, Minn	H. W. Woltman	(See page 1354)				10	.....	12	.....
Homer G. Phillips Hospital ★[2,5]	St. Louis	E. F. Gildea	465	777	62	8	2	10/1	12	80.00
Brooklyn Hospital ★[2]	Brooklyn		...	.....	...	..	2	.....	12	.....
Kings County Hospital ★[2,4]	Brooklyn	A. Rabiner	1,997	1,967	663	64	4	7/1	12-24	25.00
Bellevue Hospital, Div. II—Cornell U.★[2,4]	New York City	F. Kennedy	362[b]	5,345[b]	38[b]	14[b]	5	Varies	12	25.00
Bellevue Hospital, Div. III—N. Y. Univ.★[2,4]	New York City	S. B. Wortis	3,000[b]	1,500[b]	38[b]	14[b]	2	Varies	12-36	25.00
Goldwater Memorial Hospital ★[2,4]	New York City	H. A. Riley, E. D. Friedman & E. G. Zabriskie	674	451	114	36	8	4/1	12	50.00
Lenox Hill Hospital ★[2,4]	New York City	T. K. Davis	271	1,193	13	4	1	1/1	12	50.00
Metropolitan Hospital ★[2,4]	New York City	S. P. Jewett	...	1,455	11	3	1	5/15	12	100.00
Montefiore Hosp. for Chronic Diseases ★[3,4]	New York City	H. H. Merritt	226	.....	31	20	5	1/1, 7/1	12	50.00
Morrisania City Hospital ★[2]	New York City	N. Savitsky	.....	798	...	..	2	4/1	15	50.00
Mount Sinai Hospital ★[2,4]	New York City	(Includes Neurosurgery and Psychiatry)					5	1/1, 7/1	18	50.00
New York City Hospital ★[2]	New York City	L. Y. Lyons	544	1,095	148	32	1	7/1	12	100.00
Presbyterian Hospital ★[2,4]	New York City	T. J. Putnam	(See Neurosurgery)				15	.....	12	.....
†Rochester General Hospital ★[1]	Rochester, N. Y.		.....	.....	...	..	1	7/1	12	60.00
Duke Hospital ★[2,4]	Durham, N. C.	R. Graves	178	1,510	2	1	4	4/1	12	83.33
Cincinnati General Hospital ★[2]	Cincinnati	H. D. McIntyre and C. Aring	.....	.....	...	..	2	.....	12	.....
Hospital of the Univ. of Pennsylvania ★[2,4]	Philadelphia	G. D. Gammon	440	2,815	6	5	2	4/1	12-24	50.00
Jefferson Medical College Hospital ★[2]	Philadelphia	B. J. Alpers	597	2,564	...	..	1	.....	12	.....
Temple University Hospital ★[2,4]	Philadelphia	S. F. Gilpin	163	504	11	3	1	... .	12-36	.....
†Galveston State Psychopathic Hospital [1]	Galveston, Tex	J. R. Ewalt	.....	.....	2	1	6	7/1	12-36	200.00

Hospitals, 35; Assistant Residencies and Residencies, 128

10. NEUROLOGICAL SURGERY

Los Angeles County Hospital ★[4]	Los Angeles	C. W. Rand	2,168	774	230	22	3	4/1, 7/1	36	$157.20
Franklin Hospital ★	San Francisco	H. A. Brown	698	.....	18	8	4	7/1	12	200.00
University of California Hospital ★[4]	San Francisco	H. C. Naffziger	405	.....	24	19	2	7/1, 11/1	12	65.00
Hartford Hospital ★	Hartford, Conn	O. G. Wiedman	.....	.....	...	..	2	7/1	12-36	50.00
St. Vincent's Hospital ★	Jacksonville, Fla	J. G. Lyerly	.....	.....	24	8	2	7/1	12	125.00
Chicago Memorial Hospital ★	Chicago	P. C. Buey	254	528	16	13	2	7/1	12-24	100.00
Illinois Neuropsychiatric Institute ★	Chicago	E. Oldberg	.....	.....	...	..	3	.....	12	.....
Mercy Hospital, Loyola Univ. Clinics ★	Chicago		361	32	18	17	1	Varies	12-48	25.00
Passavant Memorial Hospital ★	Chicago	L. Davis	(Included in Surgery)				1	.....	12	.....
Presbyterian Hospital ★	Chicago	A. Verbrugghen	171	73	17	10	1	11/1	12-36	50.00
St. Luke's Hospital ★	Chicago	E. Oldberg	189	.....	23	16	2	7/1	12-36	25.00
University of Chicago Clinics ★	Chicago	J. I. Woolf	233	1,374	15	14	2	.....	12	25.00
†University of Kansas Hospitals ★	Kansas City, Kan		271	.....	22	12	1	.....	12	.....
†Louisville General Hospital ★	Louisville, Ky	E. G. Grantham	1,000	.....	...	..	2	7/1	12-24	.....
Johns Hopkins Hospital ★	Baltimore		822	.....	42	20	3	4/1	12	.....
Boston City Hospital ★[4]	Boston	D. Munro	488	.....	101	60	2	.....	12	50.00
Lahey Clinic	Boston	G. Horrax	1,000	2,500	24	17	5	Varies	12-36	125.00
Massachusetts General Hospital ★	Boston		.....	.....	...	..	2	.....	12	.....
Henry Ford Hospital ★[4]	Detroit	A. S. Crawford	202	1,261	13	5	2	4/1	18-36	175.00
University Hospitals ★	Minneapolis	W. T. Peyton	213	509	30	18	1	7/1	36	91.50
Mayo Foundation	Rochester, Minn	A. W. Adson	(See page 1354)					.....	12	.....
Barnes ★	St. Louis	E. Sachs	250	.....	36	25	2	.....	12	.....
University of Nebraska Hospital ★	Omaha	J. J. Keegan	26	.....	2	2	1	.....	12	.....
Albany Hospital ★[4]	Albany, N. Y.	E. H. Campbell Jr.	524	97	26	17	2	4/1	12	25.00
Jewish Hospital ★[4]	Brooklyn	I. Tarlov	439	444	52	21	3	1/1	24	25.00
Kings County Hospital ★	Brooklyn	E. J. Browder	2,329	1,152	205	103	2	7/1	12-24	25.00
Buffalo General Hospital ★[4]	Buffalo	W. B. Hamby	372	4	42	28	1	4/1	12-36	25.00
Bellevue Hospital, Div. III—N. Y. Univ.★[4]	New York City	A. Wright	1,229[b]	4,800[b]	90[b]	80[b]	2	.....	12-36	.....
Montefiore Hospital for Chronic Diseases ★	New York City	L. M. Davidoff	(Included in Neurology)				2	1/1, 7/1	12	50.00
Presbyterian Hospital ★[1,7]	New York City	T. J. Putnam	3,382	14,138	168	..	19	.....	12	40.00
Strong Memorial and Rochester Municipal Hospitals ★[4]	Rochester, N. Y.	W. P. Van Wagenen	201	227	(Included in Surgery)		2	7/1	12-24	41.66
Cincinnati General Hospital ★	Cincinnati		(Included in Surgery)				2	.....	12	.....
Cleveland Clinic Foundation Hospital	Cleveland	W. J. Gardner	574	4,285	51	27	6	1/1, 7/1	12-36	100.00
White Cross Hospital ★	Columbus, O.	H. E. LeFever	735	.....	86	58	1	4/1	12-24	100.00
†University Hospitals ★	Oklahoma City	H. Wilkens	(Included in Surg.)	375	...	..	11	.....	12-27	75.00
Hospital of the Univ. of Pennsylvania ★[4]	Philadelphia	F. C. Grant	698	240	47	36	3	9/1	12-36	60.00
Temple University Hospital ★[4]	Philadelphia	M. Scott	454	1,089	39	12	1	.....	36	50.00
Baptist Memorial Hospital ★	Memphis, Tenn	R. E. Semmes	1,102	.....	55	16	4	10/1	12	100.00
Vanderbilt University Hospital ★[4]	Nashville, Tenn	C. Pilchner	349[b]	.....	13[b]	8[b]	2	4/1	12	.....
University of Virginia Hospital ★[4]	Charlottesville, Va	W. G. Crutchfield	645	379	27	15	7	7/1	12	25.00
Medical College of Virginia, Hospital Div.★	Richmond, Va	C. C. Coleman	893	313	66	15	3	4/1	12	.....

Hospitals, 41; Assistant Residencies and Residencies, 127

Numerical and other references will be found on page 1354.

11. OBSTETRICS AND GYNECOLOGY

The following services are approved by the Council and the American Board of Obstetrics and Gynecology

United States Navy.—Residencies available to medical officers, U. S. Navy

U. S. Naval Hospital * (OBG).....Annapolis, Md.
U. S. Naval Hospital * (OBG).....Chelsea, Mass.
U. S. Naval Hospital * (OBG).....Brooklyn
U. S. Naval Hospital * (OBG).....Philadelphia
U. S. Naval Hospital * (OBG).....Norfolk, Va.
U. S. Naval Hospital * (OBG).....Portsmouth, Va.

Name of Hospital	Location	Chief of Service	Residencies Approved	Inpatients Treated [6] OB	Inpatients Treated [6] Gyn	Outpatient Visits OB	Outpatient Visits Gyn	Asst. Res. and Residencies*	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Jefferson and Hillman Hospitals *†	Birmingham, Ala.	J. R. Garber and W. N. Jones	OBG	2,617	1,521	2,733	3,502	4	7/1	12-36	$ 50.00
Employees' Hospital of the Tennessee Coal, Iron and Railroad Company *	Fairfield, Ala.	J. H. Williams	OB	1,249	.....	5,859	.....	1	7/1	12-24	150.00
†University Hospitals *	Little Rock, Ark.	C. Henry and G. Johnson	OBG	893	485	4,626	3,778	3	7/1	12-36	50.00
†California Hospital *†	Los Angeles	D. G. Tollefson	OB	2,966	.....	258	.....	1	7/1	12	125.00
Los Angeles County Hospital *†	Los Angeles	B. J. Hanley	OBG	5,030	1,491	1,501	4,324	6	4/1, 7/1	12-42	157.20
†Queen of Angels Hospital *†	Los Angeles	H. Fist	OBG	2,965	1,378	2,154	360	3	7/1	12	100.00
White Memorial Hospital *†	Los Angeles	R. J. Thompson	OBG	1,729	723	9,200	7,252	2	4/1	12	31.00
Highlands-Alameda County Hospital *†	Oakland, Calif.	C. A. DePuy and O. O. T. McAllister	OBG	1,333	.....	.....	.....	2	12/1	12-24	105.00
†Samuel Merritt Hospital	Oakland, Calif.	C. C. Hall and W. Mills	OBG	.....	.....	.....	.....	1	.....	12	.....
†Collis P. and Howard Huntington Memorial Hospital *	Pasadena, Calif.	.....	OBG	.....	.....	.....	.....	1	.....	12	.....
Children's Hospital *†	San Francisco	H. A. Stephenson	OBG	2,995[5]	.....	.....	.....	2	.....	12	.....
†Mary's Help Hospital *	San Francisco	C. Cooley	OBG	2,114	318	687	348	1	7/1	12	200.00
St. Mary's Hospital *	San Francisco	P. H. Arnot	OB	1,867[5]	.....	.....	.....	2	4/1	12	100.00
San Francisco Hospital *†	San Francisco	W. G. Moore	OBG	1,164	719	2,957	.....	4	Varies	12	150.00
Stanford University Hospitals *†	San Francisco	T. H. Kelly	OBG	2,282	946	14,991	.....	4	7/1	12-24	50.00
University of California Hospital *†	San Francisco	H. F. Traut	OBG	1,103	781	400	538	4	Varies	12	65.00
Santa Clara County Hospital *	San Jose, Calif.	A. Shufelt	OBG	.....	.....	.....	.....	1	.....	12-24	.....
Colorado General Hospital *	Denver	C. B. Ingraham	OBG	473	318	2,586	1,822	2	.....	12	.....
†Denver General Hospital *	Denver	C. Powell	OBG	446	686	1,145	518	1	1/1	12	50.00
†St. Luke's Hospital *	Denver	J. R. Evans	OBG	1,437	849	592	245	1	12/1	12-36	50.00
†Hartford Hospital *	Hartford, Conn.	.....	OBG	4,870	1,734	2,585	419	3	Varies	12	50.00
Grace-New Haven Community Hospital Grace Unit *†	New Haven, Conn.	H. B. Perrins	OBG	1,399	574	398	253	4	Varies	12-36	40.00
New Haven Unit *†	New Haven, Conn.	A. H. Morse	OBG	1,499	663	5,240	2,613	4	4/1	12	.....
Hospital of St. Raphael *	New Haven, Conn.	C. E. Johnson	OB	1,031	.....	1,224	.....	3	4/1	12-36	75.00
Columbia Hospital for Women and Lying-In Asylum *	Washington, D. C.	.....	OBG	3,717	1,192	7,649	4,149	9	.....	12	.....
Freedmen's Hospital *†	Washington, D. C.	J. W. Ross	OBG	2,329	961	3,914	2,761	3	7/1	12-36	50.00
Gallinger Municipal Hospital *†	Washington, D. C.	.....	OBG	3,444	602	3,333	2,962	5	3/1	12-36	50.00
Garfield Memorial Hospital *†	Washington, D. C.	H. P. Parker	OB	3,134	.....	3,497	.....	4	4/1	12	75.00
Providence Hospital *	Washington, D. C.	G. Ellis	OB	3,154	.....	663	.....	1	.....	12	.....
Sibley Memorial Hospital *	Washington, D. C.	J. Kotz	OB	2,955[5]	.....	.....	.....	1	.....	12	100.00
Grady Memorial Hospital *	Atlanta, Ga.	J. R. McCord	OBG	3,334	753	14,567	11,820	10	.....	12	.....
University Hospital *†	Augusta, Ga.	R. Torpin	OBG	2,113	864	5,169	955	3	7/1	12-24	35.00
†Augustana Hospital *	Chicago	W. H. Browne	OBG	1,057	1,124	.....	1,500	1	7/1	12	25.00
Chicago Lying-In Hospital and Dispensary	Chicago	.....	.....	(See University of Chicago Clinics)							
Chicago Maternity Center *	Chicago	B. E. Tucker	OB	2,617	.....	13,056	.....	15	1/1	12	75.00
Cook County Hospital *†	Chicago	J. E. Fitzgerald	OB	6,775	.....	7,562	.....	8	Varies	12-36	25.00
Grant Hospital *†	Chicago	F. H. Falls	OB	1,459[5]	.....	.....	.....	1	7/1	12-36	125.00
Henrotin Hospital *†	Chicago	E. L. Cornell	OB	744	.....	575	.....	1	10/1	12-36	100.00
Illinois Masonic Hospital *†	Chicago	F. J. Roos	OBG	663	377	.....	.....	1	1/1, 7/1	12	100.00
Lewis Memorial Maternity Hospital *	Chicago	H. E. Schmitz	OBG	992	14	9,069	201	6	7/1	12-60	50.00
Mercy Hospital-Loyola University Clinics *†	Chicago	H. E. Schmitz	OBG	758	827	756	1,966	3	4/1	12	50.00
Michael Reese Hospital *†	Chicago	L. Frankenthal Jr.	OBG	2,151	1,369	1,672	1,355	5	.....	12-36	.....
Mount Sinai Hospital *†	Chicago	.....	OBG	1,154	462	333	404	1	1/1	12	50.00
Passavant Memorial Hospital *†	Chicago	A. H. Curtis	Gyn	.....	814	.....	656	2	.....	12	.....
Presbyterian Hospital *	Chicago	E. D. Allen	OBG	3,376	.....	1,121	.....	4	4/1	12-27	50.00
Provident Hospital *	Chicago	W. Gibbs and P. M. Santos	OBG	1,483	786	1,785	.....	4	7/1	12	50.00
†Ravenswood Hospital *†	Chicago	C. C. Rentfro	OBG	1,254	624	.....	150	2	7/1	12	100.00
Research and Educational Hospitals *†	Chicago	F. H. Falls	OB	803	.....	6,126	.....	3	.....	12	55.00
St. Anne's Hospital *	Chicago	R. J. Hawkins	OB	2,004	.....	.....	.....	2	1/1	12-36	.....
†St. Elizabeth Hospital *	Chicago	J. R. Lavieri and B. S. Milton	OBG	2,174	1,545	.....	.....	1	.....	12	.....
St. Joseph Hospital *	Chicago	C. Geiger	OB	1,698	.....	1,793	.....	1	4/1	12	75.00
			Gyn	.....	629	.....	274	1	.....	12	125.00
St. Luke's Hospital *†	Chicago	H. O. Jones	OBG	1,524	950	3,725	1,921	3	7/1	12-36	75.00
†St. Mary of Nazareth Hospital *	Chicago	M. Uznanski	OBG	1,985	396	.....	.....	1	1/1	12-18	125.00
St. Vincent's Infant and Maternity Hosp.*	Chicago	H. E. Schmitz	OB	326	.....	2,480	.....	1	.....	12	50.00
†Swedish Covenant Hospital *†	Chicago	G. L. Rosene and R. A. Lifvendahl	OBG	1,700	625	.....	.....	1	7/1	12	75.00
University of Chicago Clinics *†	Chicago	W. J. Dieckmann	OBG	4,291	787	24,398	10,182	6	Varies	12-36	25.00
Wesley Memorial Hospital *†	Chicago	G. H. Gardner	OB	1,589	.....	.....	.....	1	Varies	12-36	25.00
		G. H. Gardner	Gyn	.....	750	.....	.....	1	Varies	12-36	25.00
Women and Children's Hospital *†	Chicago	M. E. Williams and R. E. Tucker	OBG	975	.....	528	.....	1	.....	12	125.00
†Evanston Hospital *	Evanston, Ill.	W. C. Danforth	OBG	1,316	661	996	419	1	.....	12	50.00
St. Francis Hospital *	Evanston, Ill.	E. C. McGill	OBG	1,748	621	.....	.....	1	.....	12	.....
Little Company of Mary Hospital *	Evergreen Park, Ill.	P. E. Lawler	OB	2,140	.....	.....	.....	2	1/1	12	100.00
St. Francis Hospital *†	Peoria, Ill.	W. A. Michael	OBG	2,065	776	204	259	1	7/1	12-36	150.00
Indianapolis City Hospital *†	Indianapolis	J. W. Hofmann and H. F. Beckman	OBG	1,059	839	4,773	2,816	3	7/1	12	80.00
Indiana University Medical Center *†	Indianapolis	H. F. Beckman	OB	1,766	.....	2,873	.....	2	7/1	12-36	33.33
Methodist Hospital *	Indianapolis	H. F. Beckman	OB	3,369	.....	.....	.....	2	.....	12-24	180.00[9]
University Hospitals *†	Iowa City, Ia.	E. D. Plass	OBG	775	810	223	1,727	11	7/1	12	40.00
University of Kansas Hospitals *†	Kansas City, Kan.	L. A. Calkins	OBG	833	509	3,027	2,333	4	5/1	12-36	50.00
St. Francis Hospital *	Wichita, Kan.	R. A. West	OBG	2,116	.....	1,620	.....	1	7/1	12	100.00
Louisville General Hospital *	Louisville, Ky.	C. W. Hibbitt	OBG	1,256	651	6,815	5,227	5	4/1	12-48	45.00
Charity Hospital of Louisiana *†	New Orleans	.....	OBG	6,531	3,296	23,764	15,377	18	Varies	12-36	25.00
Touro Infirmary *	New Orleans	W. E. Levy	OB	1,759	.....	1,961	.....	2	7/1	12	17.50
		E. Tyrone	Gyn	.....	1,428	.....	1,234	2	7/1	12	17.50
Baltimore City Hospitals *†	Baltimore	L. H. Douglas	OB	1,392	.....	12	.....	5	4/1	12	40.00
†Bon Secours Hosspital *	Baltimore	E. Novak and J. M. Reese	OBG	869	788	150	450	2	.....	12	60.00
Franklin Square Hospital *†	Baltimore	I. A. Siegel	OB	1,216	.....	.....	.....	4	.....	12	.....
Hospital for Women of Maryland *†	Baltimore	J. Berglund	OB	1,292	.....	2,382	.....	1	4/1	12-15	75.00
Johns Hopkins Hospital *†	Baltimore	N. J. Eastman	OB	2,524	.....	15,089	.....	5	4/1	12	.....
Maryland General Hospital *	Baltimore	R. W. TeLinde	Gyn	.....	2,185	.....	10,537	5	4/1	12	.....
		E. H. Kloman	OBG	805	412	169	31	2	4/1	12-15	50.00

Numerical and other references will be found on page 1354.

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11. OBSTETRICS AND GYNECOLOGY—Continued

Name of Hospital	Location	Chief of Service	Residencies Approved	Inpatients Treated [6] OB	Inpatients Treated [6] Gyn	Outpatient Visits OB	Outpatient Visits Gyn	Asst. Res. and Residencies [8]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Mercy Hospital ★	Baltimore	T. K. Galvin and E. P. Smith	OBG	.....	.....	.....	.....	6	7/1	12	$ 50.00
Provident Hospital and Free Dispensary ★‡	Baltimore	L. H. Douglas	OB	827	.....	1,158	.....	1	7/1	12	50.00
†St. Agnes Hospital ★	Baltimore	E. Novak and D. P. Howe	OBG	1,408	418	473	112	2	.....	12	.....
St. Joseph's Hospital ★	Baltimore	T. K. Galvin and H. B. McNally	OBG	1,278	755	2,701	1,126	3	4/1	12-36	50.00
Sinai Hospital ★‡	Baltimore	A. F. Guttmacher	OB	2,057	.....	5,894	.....	2	7/1	12	35.00
Union Memorial Hospital ★	Baltimore	J. M. Haws	OB	1,192	.....	2,416	.....	2	Varies	12	20.00
University Hospital ★‡	Baltimore	E. L. Douglass	OB	2,532	.....	11,964	.....	4	4/1	12-15	50.00
†West Baltimore General Hospital ★‡	Baltimore	J. M. Hundley Jr.	Gyn	.....	997	.....	5,556	4	4/1	12-15	50.00
Boston City Hospital ★‡	Boston	J. M. Reese and J. Brown	OBG	895	145	487	227	2	.....	12	70.00
Boston Lying-In Hospital	Boston	J. P. Cohen and F. L. Good	OBG	4,271		10,924		2	.....	12	50.00
Carney Hospital ★	Boston	F. C. Irving	OB	3,025	.....	1,031	.....	6	1/1, 7/1	12-18	50.00
Evangeline Booth Maternity Hospital and Home ★	Boston	L. E. Phaneuf	OBG	810	660	2,029	1,075	3	.....	12	.....
Massachusetts Memorial Hospitals ★‡	Boston	A. K. Paine	OB	904	.....	2,093	.....	2	.....	12	83.33
†New England Hospital for Women and Children ★	Boston	C. W. Sewall	OB	1,270	.....	3,482	.....	2	4/1	12-24	50.00
Free Hospital for Women †	Brookline, Mass.	M. Woodman	OB	1,863	.....	734	.....	1	4/1	12	.....
†St. Joseph's Mercy Hospital ★‡	Ann Arbor, Mich.	F. A. Pemberton	Gyn	.....	2,408	.....	11,407	8	1/1	12	25.00
University Hospital ★‡	Ann Arbor, Mich.	H. H. Cummings	OBG	1,189	454	.....	7,102	1	.....	12	.....
City of Detroit Receiving Hospital ★‡	Detroit	N. F. Miller	OBG	1,961	820	2,652	3,761	4	Varies	12	101.00
Florence Crittenton Hospital	Detroit	W. Seeley	OBG	e	893	e	2,771	2	7/1	12-48	172.50
Grace Hospital ★‡	Detroit	H. A. Pearse	OBG	.....	.....	.....	.....	4	.....	12	.....
Harper Hospital ★‡	Detroit	M. A. Darling	OBG	2,267	1,953	71	1,062	6	4/1	12-36	125.00
Henry Ford Hospital ★‡	Detroit	G. Kamperman	OBG	2,422	984	.....	.....	3	.....	12	85.00
Herman Kiefer Hospital ★	Detroit	J. F. Pratt	OBG	1,855	756	6,934	18,632	6	4/1	12-48	175.00
Mount Carmel Mercy Hospital ★	Detroit	W. F. Seeley	OBG	1,251	f	.....	f	2	7/1	12-24	200.00
Providence Hospital ★	Detroit	A. K. Northrop	OB	3,917	1,506	.....	.....	1	.....	12	.....
St. Mary's Hospital ★	Detroit	R. Alles	OBG	3,230	1,525	.....	.....	4	.....	12	.....
Woman's Hospital ★‡	Detroit	V. J. Turcotte	OBG	2,080	1,252	125	312	4	Varies	12-36	150.00
†Butterworth Hospital ★‡	Grand Rapids, Mich.	L. E. Daniels and H. M. Nelson	OBG	.....	.....	.....	.....	6	4/1	12-48	100.00
St. Mary's Hospital ★	Duluth, Minn.	L. Bosch	OBG	1,811	1,082	424	.....	2	7/1	12	50.00
Minneapolis General Hospital ★‡	Minneapolis	J. R. Manley	OB	1,430	.....	2369	.....	1	.....	12	.....
†St. Barnabas Hospital ★‡	Minneapolis	L. A. Lang	OBG	369	383	679	1,085	2	1/1, 7/1	12-36	91.50
St. Mary's Hospital ★‡	Minneapolis	O. F. Robbins	OBG	1,464	601	.....	.....	1	7/1	12	125.00
University Hospitals ★‡	Minneapolis	L. A. Lang	OB	2,238	.....	.....	.....	2	11/1	12	150.00
Mayo Foundation	Rochester, Minn.	J. L. McKelvey	OBG	337	482	815	2,877	3	7/1	12-36	91.50
Anchor Hospital ★	St. Paul	R. D. Mussey	OBG	(See page 1354)				12	.....	12	.....
Charles T. Miller Hospital ★	St. Paul	G. Schulze	OBG	206	191	483	918	1	1/1	12-36	91.50
Kansas City General Hospital ★	Kansas City, Mo.	R. Countryman and E. C. Hartley	OBG	2,046	821	594	933	2	4/1	12	.....
†DePaul Hospital ★	St. Louis	T. H. Aschman	OBG	608	664	2,360	2,965	4	4/1, 12/1	12-36	75.00
Homer G. Phillips Hospital ★‡	St. Louis	L. M. Riordan	OBG	1,880	402	103		1	4/1, 7/1	12	60.00
Jewish Hospital ★‡	St. Louis	T. E. Brown	OBG	1,010	1,059	.....	1,864	5	10/1	12	80.00
St. Louis City Hospital ★‡	St. Louis	M. Meyerhardt and S. Soule	OBG	1,018	696	360	619	2	4/1	12-15	50.00
St. Louis Maternity Hospital ★	St. Louis	J. A. Hardy	OBG	1,143	1,066	1,444	1,411	3	4/1	12-36	80.00
St. Luke's Hospital ★	St. Louis	W. Allen	OBG	2,723	k	5,971	.....	7	7/1	12	25.00
St. Mary's Group of Hospitals ★	St. Louis	C. O'Keefe	OBG	632	638	.....	.....	1	7/1	12	75.00
Creighton Memorial St. Joseph's Hosp. ★‡	Omaha	J. A. Hardy Jr.	OBG	2,588	1,143	8,531	4,359	7	.....	12-36	35.00
University of Nebraska Hospital ★	Omaha	M. E. Grier	OBG	1,842	1,943	938	1,029	2	7/1	12-24	100.00
Cooper Hospital ★	Camden, N. J.	E. C. Sage	OBG	322	230	.....	.....	1	4/1	12	50.00
Jersey City Hospital ★‡	Jersey City, N. J.	A. B. Davis and G. B. German	OB	2,799	.....	7,637	.....	2	7/1	12-36	83.33
Margaret Hague Maternity Hospital ★	Jersey City, N. J.	F. C. Holden	Gyn	.....	899	.....	3,155	4	.....	12	.....
Albany Hospital ★‡	Albany, N. Y.	S. A. Cosgrove	OB	7,735	.....	17,103	.....	14	Varies	12-36	50.00
Anthony N. Brady Maternity Home ★	Albany, N. Y.	A. J. Wallingford	Gyn	.....	2,302	.....	704	3	4/1, 7/1	12	25.00
Beth-El Hospital ★	Brooklyn	F. C. Loehner	OBG	1,776h	.....	1,358h	.....	2	.....	12	25.00
Brooklyn Hospital ★‡	Brooklyn	A. Koplowitz	OB	2,817	.....	2,165	.....	2	4/1	12	100.00
Cumberland Hospital ★‡	Brooklyn	J. T. Wallace	OBG	1,531	503	3,146	1,328	2	4/1	12-15	85.00
Greenpoint Hospital ★‡	Brooklyn	S. Lubin	OB	1,012	.....	3,850	.....	2	4/1	12-15	70.00
Jewish Hospital ★‡	Brooklyn	T. S. Welton	OBG	680	480	2,525	2,496	2	1/1, 4/1	12	120.00
Kings County Hospital ★‡	Brooklyn	C. Gordon and R. Garlick	OBG	4,884	1,266	3,835	1,887	5	7/1	12-18	25.00
Long Island College Hospital ★‡	Brooklyn	A. C. Beck	OBG	2,973	2,927	10,072	4,681	4	7/1	12-24	25.00
Methodist Hospital ★‡	Brooklyn	G. H. Davis	OBG	1,684	879	4,390	1,075	3	7/1	12-36	25.00
Norwegian Lutheran Deaconesses' Home and Hospital ★‡	Brooklyn	B. Harris	OB	2,358	506	4,667	648	3	.....	12	.....
St. Mary's Hospital ★‡	Brooklyn	F. B. Doyle	OBG	1,028b	.....	1,820b	.....	1	.....	12	.....
Buffalo General Hospital ★‡	Buffalo	C. C. Randall	OBG	1,107	467	2,023	541	2	4/1	12-24	50.00
Children's Hospital ★	Buffalo	L. A. Siegel	OB	883	1,054	1,487	920	3	4/1	12-36	25.00
Edward J. Meyer Memorial Hospital ★‡	Buffalo	F. G. Winkler	OBG	2,059	.....	.....	.....	1	7/1	12	25.00
Millard Fillmore Hospital ★	Buffalo	L. McLean	OB	633	527	2,281	1,504	3	Varies	12-36	59.00
Queens General Hospital ★‡	Jamaica, N. Y.	E. A. Flemming	OBG	3,322	.....	.....	.....	2	4/1	12-48	50.00
Bellevue Hospital, Div. III—N. Y. Univ. ★‡	New York City	W. Studdiford	OBG	1,204	924	3,866	.....	2	.....	12	70.00
Beth Israel Hospital ★‡	New York City	E. G. Langrock	OB	2,059b	2,284b	7,891b	6,155b	11	Varies	12	25.00
†Bronx Hospital ★‡	New York City	H. C. Falk	Gyn	2,531	.....	2,077	.....	1	4/1	12-24	50.00
Flower and Fifth Avenue Hospitals ★‡	New York City	M. Rosenso	OB	.....	1,161	.....	4,490	2	4/1	12-48	50.00
Fordham Hospital ★‡	New York City	L. S. Loizeaux	OBG	2,501	.....	2,055	.....	1	4/1	12-24	100.00
French Hospital ★‡	New York City	A. C. Butts	OB	1,522	1,268	3,263	1,070	3	7/1	12	50.00
Harlem Hospital ★‡	New York City	H. C. Williamson	OB	.....	.....	.....	.....	1	4/1	12	120.00
Lenox Hill Hospital ★‡	New York City	F. A. Kassebohm	OB	1,733	.....	4,274	.....	1	7/1	12	83.33
Lincoln Hospital ★‡	New York City	H. C. Falk	Gyn	.....	.....	.....	.....	2	.....	12	.....
Lying-In Hospital	New York City	R. L. McCready and R. C. Van Etten	OBG	1,298	624	.....	7,519	3	Varies	12	50.00
Metropolitan Hospital ★‡	New York City	H. C. Ingraham	OBG	1,669	829	8,404b	2,529b	3	Varies	12-18	50.00
Morrisania City Hospital ★‡	New York City	H. B. Safford	OBG	813	711	4,360	2,841	2	.....	12	.....
Mount Sinai Hospital ★‡	New York City	M. Goodfriend	OB	1,036	.....	4,063	.....	2	10/1	12	.....
New York City Hospital ★‡	New York City	K. Johnson and J. V. Ricel	OBG	555	664	3,782	2,190	2	4/1	12-15	50.00
New York Hospital ★‡	New York City	H. Stander	OBG	1,575	.....	20,409	9,601	16	7/1	12	50.00
									4/1	12-60	25.00

Numerical and other references will be found on page 1354.

11. OBSTETRICS AND GYNECOLOGY—Continued

Name of Hospital	Location	Chief of Service	Residencies Approved	Inpatients Treated [6] OB	Inpatients Treated [6] Gyn	Outpatient Visits OB	Outpatient Visits Gyn	Asst. Res. and Residencies [a]	Beginning of Service (1946)	Length of Service (Months)	Beginning Salary (Month)
New York Infirmary for Women and Children [a]	New York City	W. Ragland	OB	915	.....	3,644	.....	1	1/1	12	$ 75.00
New York Polyclinic Medical School and Hospital *	New York City		OB	997	.....	2,210	.....	1	4/1	12	128.25
			Gyn	.....	779	.....	2,746	1	4/1	12	25.00
New York Post-Graduate Medical School and Hospital [a]	New York City	W. T. Dannreuther	Gyn	.....	642	.....	11,564	2	10/1	12-24	30.00
Presbyterian Hospital [a]	New York City	B. P. Watson	OBG	3,674	1,409	19,982	12,632	12	.....	12	.....
Roosevelt Hospital *	New York City	T. C. Peightal	Gyn	.....	712	.....	2,433	2	.....	12-24	86.66
St. Vincent's Hospital [a]	New York City	J. F. McGrath	OBG	1,687	847	2,498	1,445	2	4/1	12-36	50.00
Sloane Hospital for Women	New York City			(See Presbyterian Hospital)							
Woman's Hospital [a]	New York City	A. H. Aldridge	OBG	2,223	2,021	7,600	17,035	11	Varies	12-24	10.00
Highland Hospital *	Rochester, N. Y.	J. B. Loder	OB	1,376	.....	275	.....	1	.....	12	.....
Rochester General Hospital [a]	Rochester, N. Y.	MacN. Wilkinson	OB	2,032	.....	744	.....	1	10/1	12-24	85.00
Strong Memorial and Rochester Municipal Hospitals [a]	Rochester, N. Y.	K. M. Wilson	OBG	1,323	1,211	2,507	2,102	6	7/1	12-48	41.66
General Hospital *	Syracuse, N. Y.	R. J. Pieri	OB	1,092	.....	643	.....	3	4/1, 7/1	12	50.00
Syracuse Memorial Hospital *	Syracuse, N. Y.	E. C. Hughes	OB	2,034	.....	.....	.....	3	7/1	12	.....
		N. P. Sears	Gyn	.....	1,228	.....	.....	3	7/1	12	.....
Charlotte Memorial Hospital [a]	Charlotte, N. C.	W. B. Bradford	OBG	907	752	1,985	62	2	.....	12-36	.....
Duke Hospital [a]	Durham, N. C.	B. Carter	OBG	1,481	964	8,969	13,416	6	4/1	12	83.33
†Watts Hospital *	Durham, N. C.	R. A. Ross	OBG	1,228	827	604	181	2	7/1	12	50.00
North Carolina Baptist Hospital [a]	Winston-Salem, N. C.	F. R. Lock	OBG	1,317	487	1,692	1,038	4	7/1	12	41.66
City Hospital *	Akron, O.		OBG	3,299	566	880	274	4	7/1	12	100.00
†Peoples Hospital [a]	Akron, O.	L. L. Botsford	OB	2,165	.....	.....	.....	1	Varies	12	250.00
†Aultman Hospital [a]	Canton, O.		OBG	1,795	827	.....	.....	3	7/1	12	75.00
Mercy Hospital *	Canton, O.	L. E. Leavenworth	OBG	2,029	381	.....	.....	2	4/1	12	100.00
†Bethesda Hospital [a]	Cincinnati	D. J. Davies	OBG	2,262	997	436	109	3	7/1	12	150.00
Cincinnati General Hospital [a]	Cincinnati	H. L. Woodward	OB	2,482	.....	2,367	.....	4	4/1	12-24	.....
City Hospital [a]	Cleveland	A. H. Bill	OB	716	.....	1,215	.....	4	7/1	12	50.00
Fairview Park Hospital *	Cleveland	E. D. Saunders	OB	2,787	.....	48	.....	1	4/1	12	100.00
Lutheran Hospital [a]	Cleveland	R. S. Dial	OB	1,202	.....	.....	.....	2	.....	12	100.00
Mount Sinai Hospital [a]	Cleveland	J. L. Bubis	OB	1,463	.....	119	.....	1	4/1	12	100.00
St. Ann's Maternity Hospital	Cleveland	J. R. Thompson	OB	1,802	.....	.....	.....	2	7/1	12	100.00
St. Luke's Hospital *	Cleveland	C. T. Hemmings	OBG	2,078	586	1,336	1,275	4	4/1	12-48	50.00
University Hospitals [a]	Cleveland	A. H. Bill	OB	4,114[b]	.....	12,296[b]	.....	4	4/1	12	25.00
		A. H. Bill	Gyn	.....	1,364[b]	.....	5,384[b]	5	4/1	12	25.00
†St. Ann's Maternity Hospital	Columbus, O.	R. E. Krigbaum	OB	1,240	.....	.....	.....	1	.....	12	.....
Starling-Loving University Hospital [a]	Columbus, O.	P. J. Reel	OBG	1,297	543	3,336	1,214	3	4/1	12-18	50.00
White Cross Hospital [a]	Columbus, O.	W. D. Inglis	OB	2,279	.....	27	.....	1	4/1	12-24	100.00
Huron Road Hospital [a]	East Cleveland	A. G. Cummings and G. H. Irvin	OBG	2,618	1,349	18	88	3	7/1	12-36	80.00
Maumee Valley Hospital *	Toledo, O.	E. C. Mohr	OBG	159	105	169	149	1	.....	12	.....
Mercy Hospital *	Toledo, O.	R. C. King	OBG	2,664	973	.....	.....	1	.....	12	.....
St. Vincent's Hospital [a]	Toledo, O.	R. C. King	OB	1,357	.....	219	.....	1	.....	12	.....
†Toledo Hospital [a]	Toledo, O.	M. D. Haag	OBG	1,526	469	452	.....	1	12/1	12	.....
University Hospitals *	Oklahoma City, Okla.	E. P. Allen and G. Penick	OBG	642	529	3,597	.....	4	4/1	12-18	75.00
†Emanuel Hospital *	Portland, Ore.	W. Wilson	OBG	3,962	1,073	.....	.....	1	.....	12	.....
University of Oregon Medical School Hospitals and Clinics [a]	Portland, Ore.	H. C. Sterns	OBG	345	410	1,634	1,480	3	Varies	12-36	75.00
†Bryn Mawr Hospital *	Bryn Mawr, Pa.	C. A. Behney and J. L. Richards	OBG	1,264	843	772	323	1	.....	12	.....
George F. Geisinger Memorial Hospital *	Danville, Pa.	R. E. Necedemus	OB	869	.....	5,706	.....	2	4/1	12	75.00
†Germantown Dispensary and Hospital *	Philadelphia	J. C. Hartman and Z. B. Newton	OBG	1,733	485	2,749	692	1	.....	12	.....
Graduate Hospital of the University of Pennsylvania *	Philadelphia	W. R. Nicholson	Gyn	.....	506	.....	693	1	7/1	12-24	.....
Hahnemann Hospital [a]	Philadelphia	N. F. Paxson and E. C. Hessert	OBG	2,495	1,072	6,226	2,174	2	4/1	12-24	50.00
Hospital of the Protestant Episcopal Church [a]	Philadelphia	E. A. Schumann	OBG	2,076	595	5,308	963	2	1/1, 4/1	12	50.00
Hosp. of the Univ. of Pennsylvania [a]	Philadelphia	C. Bachman and F. L. Payne	OBG	1,704	1,740	7,890	4,176	3	9/1	12-36	41.50
Hospital of the Woman's Medical College of Pennsylvania [a]	Philadelphia	M. C. Sturgis	Gyn	.....	699	.....	2,356	1	.....	12	.....
Jefferson Medical College Hospital *	Philadelphia	L. C. Scheffey and N. W. Vaux	OBG	1,806	1,879	13,918	4,279	2	.....	12	.....
†Jewish Hospital [a]	Philadelphia		OBG	1,664	1,070	.....	.....	1	.....	12-24	.....
Mount Sinai Hospital [a]	Philadelphia		OBG	1,020	583	1,616	1,021	1	1/1	12-24	100.00
Pennsylvania Hospital *	Philadelphia		OBG	2,931	1,220	11,250	2,125	3	1/1, 4/1	12-36	20.00
Philadelphia General Hospital [a]	Philadelphia		OBG	1,812	1,115	.....	.....	2	4/1, 7/1	12-36	70.00
Temple University Hospital [a]	Philadelphia	T. L. Montgomery	OBG	1,745	765	3,303	1,289	4	.....	12-36	50.00
Woman's Hospital [a]	Philadelphia		OB	1,525	.....	.....	.....	1	.....	12	50.00
			Gyn	.....	657	.....	.....	1	.....	12	50.00
Elizabeth Steel Magee Hospital *	Pittsburgh	C. E. Zeigler and B. Z. Cashman	OBG	4,001	2,018	4,542	1,192	8	4/1	12-36	41.66
Montefiore Hospital *	Pittsburgh		OBG	756	512	614	1,169	1	4/1	12	50.00
St. Francis Hospital [a]	Pittsburgh	J. H. Carroll	OB	1,305	.....	406	.....	3	4/1	12-36	80.00
		B. Z. Cashman	Gyn	.....	883	.....	492	4	4/1	12-36	80.00
†Providence Lying-In Hospital	Providence, R. I.	B. H. Buxton	OB	5,816	.....	10,050	.....	2	4/1, 10/1	12	125.00
Roper Hospital [a]	Charleston, S. C.	L. A. Wilson and F. G. Cain	OBG	1,839	586	5,598	1,346	4	7/1	12-48	50.00
Baroness Erlanger Hospital *	Chattanooga, Tenn.	D. N. Williams	OB	2,479	.....	2,630	.....	3	.....	12	90.00
John Gaston Hospital *	Memphis, Tenn.	F. W. Whitaere	OB	2,784	.....	6,836	.....	2	.....	12	.....
		F. W. Whitaere	Gyn	.....	819	.....	5,419	1	.....	12	.....
†Methodist Hospital [a]	Memphis, Tenn.		OB	2,987	.....	.....	.....	1	.....	12	.....
†St. Joseph Hospital *	Memphis, Tenn.	M. J. Roach	OBG	1,741	1,177	433	258	1	.....	12	.....
George W. Hubbard Hospital of Meharry Medical College *	Nashville, Tenn.	R. S. Duke and M. Walker	OBG	508	387	1,658	552	2	7/1	12	75.00
Nashville General Hospital *	Nashville, Tenn.	C. W. Black	OBG	984	561	5,212	4,305	4	1/1, 4/1	12	100.00
Vanderbilt University Hospital [a]	Nashville, Tenn.	G. S. McClellan	OBG	1,397	489	6,205	4,960	5	4/1	12	.....
Baylor University Hospital [a]	Dallas, Tex.	W. K. Strother Jr.	OB	4,620	.....	4,524	.....	2	.....	12-24	50.00
Parkland Hospital [a]	Dallas, Tex.	W. Mengert	OB	1,352[b]	.....	.....	.....	5	.....	12	50.00
†Harris Memorial Methodist Hospital [a]	Fort Worth, Tex.	R. L. Grogan	OBG	2,641	1,194	929	1,843	2	7/1	12	100.00
John Sealy Hospital [a]	Galveston, Tex.	W. R. Cooke	OBG	995	804		9,604	3	.....	12	.....
Hermann Hospital [a]	Houston, Tex.	A. L. Dippel and F. W. Bertner	OBG	935	962	2,790	2,205	3	.....	12	.....
†Jefferson Davis Hospital [a]	Houston, Tex.	J. Z. Gaston and W. S. Reed, Jr.	OBG	1,426	830	4,396	3,114	2	7/1	12-36	50.00
Methodist Hospital [a]	Houston, Tex.		OB	807	.....	.....	.....	1	1/1	12-36	75.00

Numerical and other references will be found on page 1354.

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11. OBSTETRICS AND GYNECOLOGY—Continued

Name of Hospital	Location	Chief of Service	Residencies Approved	Inpatients Treated [6] OB	Inpatients Treated [6] Gyn	Outpatient Visits OB	Outpatient Visits Gyn	Asst. Res. and Residencies [8]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
St. Joseph's Infirmary ★	Houston, Tex.	H. W. Johnson	OB	13,813	.....	7,451	.....	3	1/1	12-24	$150.00
†Dr. W. H. Groves Latter-Day Saints Hospital ★†	Salt Lake City		OBG	2,903	1,138	.....	.....	1	7/1	12	100.00
Salt Lake County General Hospital ★	Salt Lake City	C. E. McLennan	OBG	430	560	1,230	765	1	7/1	12-36	50.00
University of Virginia Hospital ★†	Charlottesville, Va.	T. J. Williams	OBG	1,238	609	5,821	.....	8	1/1	12	15.00
Medical College of Virginia, Hosp. Div.★†	Richmond, Va.	H. H. Ware	OB	3,270	.....	6,265	.....	4	4/1	12	37.50
Providence Hospital ★	Seattle	H. V. Bories	OB	3,356	.....	337	.....	2	2/1	12	100.00
†Swedish Hospital ★	Seattle	W. W. Bell	OBG	2,856	993	.....	.....	1	.....	12	.....
†Virginia Mason Hospital ★	Seattle		OBG	1,488	426	.....	.....	1	Varies	12	100.00
Northern Permanente Foundation ★	Vancouver, Wash.	D. G. Wiley	OBG	801	1,152	6,283	10,769	1	4/1	12	250.00
St. Mary's Hospital ★	Huntington, W. Va.	J. R. Bloss	OB	1,437[9]	.....	.....	.....	1	.....	12	.....
State of Wisconsin General Hospital ★†	Madison, Wis.	J. W. Harris	OBG	1,095		8,024		4	7/1	12-36	25.00
Milwaukee County Hospital ★†	Milwaukee	H. J. Olson	OBG	370	585	872	1,037	6	4/1	12-36	68.22
†Milwaukee Hospital ★	Milwaukee	H. W. Shutter and R. S. Cron	OBG	2,003	978	.....	.....	1	.....	12	.....
Kapiolani Maternity and Gynecological Hospital [4]	Honolulu, Hawaii	G. A. Batten	OB	2,929	.....	.....	.....	3	.....	12	.....

Hospitals, 245; Assistant Residencies and Residencies, 768

12. OPHTHALMOLOGY AND OTOLARYNGOLOGY

United States Navy.—Residencies available to medical officers, U. S. Navy
†U. S. Naval Hospital ★ (Otol.)—Bethesda, Md.
†U. S. Naval Hospital ★ (Otol.)—Philadelphia

Name of Hospital	Location	Chief of Service	Inpatients Treated [6] Oph	Inpatients Treated [6] Otol	Outpatient Visits Oph	Outpatient Visits Otol	Asst. Res. and Residencies [8]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Children's Hospital [4]	Los Angeles	J. M. Brown	.....	1,329	.....	1,914	1	.....	12	.....
Los Angeles County Hospital ★†	Los Angeles	W. Boyce, R. Irvine	716	.....	8,207	.....	2	4/1, 7/1	12-24	$137.20
		P. Viole	.....	1,999	.....	7,455	2	4/1, 7/1	12-24	137.20
White Memorial Hospital ★	Los Angeles	W. Boyce	178	.....	8,027	.....	1	4/1	12	31.00
		B. Colver	.....	1,281	.....	9,484	2	4/1	12	31.00
San Diego County General Hospital ★	San Diego, Calif.	J. J. Pendergrast and C. W. Brown	534		5,462		1	4/1	12	189.00
Children's Hospital ★†	San Francisco	R. C. Martin	.....	.....	.....	.....	2	.....	12	.....
Green's Eye Hospital	San Francisco	V. V. Suglian	1,079[9]	.....	12,926	.....	2	7/15	12-24	100.00
		L. Z. Fichman	.....	238[9]	.....	1,909	2	7/15	12-24	100.00
San Francisco Hospital ★†	San Francisco		419	.....	.....	.....	3	.....	12	150.00
Stanford University Hospitals ★†	San Francisco	H. Barkan	756	.....	7,736	.....	3	7/1	12-24	50.00
		R. C. McNaught	.....	889	.....	7,291	2	7/1	12-24	50.00
University of California Hospital ★†	San Francisco	F. C. Cordes	273	.....	782	.....	2	Varies	12	65.00
		W. B. Smith	.....	407	.....	261	1	Varies	12	65.00
Colorado General Hospital ★	Denver	W. N. Bayne	301	.....	5,964	.....	2	1/1	12-36	.....
		F. R. Spencer	.....	323	.....	3,536	2	10/1	12-24	70.00
Grace—New Haven Community Hospital, New Haven Unit ★†	New Haven, Conn.	J. Frazer	.....	981	.....	6,147	3	4/1	12	.....
Episcopal Eye, Ear and Throat Hospital	Washington, D. C.	J. N. Greear	1,465	.....	18,092	.....	4	3/1	12-24	25.00
		A. M. Zinkhan	.....	5,244	.....	9,402	4	3/1	12-24	25.00
Gallinger Municipal Hospital ★†	Washington, D. C.		337		924		1	3/1	12-24	50.00
Grady Memorial Hospital ★†	Atlanta, Ga.	G. E. Clay and W. C. Warren	288	648	6,145	4,560	6	.....	12	.....
Cook County Hospital ★†	Chicago	W. Monereiff	374	.....	10,709	.....	5	.....	12-36	25.00
		J. Lifschutz	.....	2,458	.....	12,788	5	.....	12-36	25.00
Illinois Eye and Ear Infirmary ★	Chicago	H. S. Gradle	1,859	.....	39,934	.....	18	7/1	12-24	25.00
			.....	1,637	.....	17,449	15	7/1	12-24	25.00
Mercy Hospital, Loyola University Clinics ★	Chicago	R. W. Kerwin	150	1,196	1,199	1,085	1	4/1	12	.....
Michael Reese Hospital ★†	Chicago	S. J. Meyer	564	.....	2,879	.....	1	.....	12-36	.....
		S. J. Pearlman	.....	2,030	.....	1,405	1	.....	12-36	.....
Passavant Memorial Hospital ★†	Chicago	D. Vail	306	.....	682	.....	2	.....	12	.....
		J. F. Delph	.....	317	.....	964	1	.....	12	.....
Presbyterian Hospital ★	Chicago	E. V. L. Brown	355	.....	4,832	.....	2	4/1	12	50.00
		D. B. Hayden	.....	982	.....	3,537	2	4/1	12	50.00
Provident Hospital ★†	Chicago	C. L. Forney	.....	.....	5,356	1,515	1	7/1	12	50.00
Research and Educational Hospitals ★	Chicago	H. Beard	226	.....	6,163	.....	2	.....	12-24	55.00
		R. Hollender	.....	472	.....	7,634	1	.....	12-24	55.00
St. Luke's Hospital ★	Chicago	W. H. Theobold	326	589	566	1,210	3	7/1	12-36	25.00
University of Chicago Clinics ★	Chicago	A. Krause	175	.....	6,853	.....	6	.....	12-36	25.00
		J. R. Lindsay	.....	490	.....	9,244	4	.....	12-24	25.00
Wesley Memorial Hospital ★†	Chicago	W. A. Mann	301	.....	.....	.....	1	.....	12-36	25.00
Indianapolis City Hospital ★	Indianapolis	B. J. Larkin	166	.....	3,765	.....	2	.....	12-24	60.00
		W. F. Molt	.....	582	.....	2,967	2	.....	12-24	60.00
Indiana University Medical Center ★†	Indianapolis	R. M. Masters	233	.....	1,790	.....	2	.....	12-36	33.33
		C. H. McCaskey	.....	424	.....	1,060	2	.....	12-36	33.33
University Hospitals ★†	Iowa City, Ia.	C. S. O'Brien	1,036	.....	5,316	.....	8	7/1	12	40.00
		D. M. Lierle	.....	1,929	.....	4,038	9	7/1	12	40.00
University of Kansas Hospitals ★†	Kansas City, Kan.	S. E. Roberts	.....	1,191	.....	2,085	1	.....	12	.....
Louisville General Hospital ★	Louisville, Ky.	C. D. Townes	115	194	3,312	2,342	2	4/1	12-24	45.00
Charity Hospital of Louisiana ★†	New Orleans		1,247	2,429	12,388	14,515	18	.....	12-36	25.00
Eye, Ear, Nose and Throat Hospital [4]	New Orleans	W. R. Buffington	2,762	.....	18,870	.....	6	.....	12-24	.....
		F. E. LeJeune	.....	4,278	.....	19,553	12	.....	12-24	.....
Touro Infirmary ★	New Orleans	E. E. Allgeyer and D. Womack	1,093		2,579		2	7/1	12	17.50
Baltimore Eye, Ear and Throat Charity Hospital [4]	Baltimore		3,969	.....	10,517	6,907	4	1/1, 7/1	12-24	10.00
Johns Hopkins Hospital ★	Baltimore	A. C. Woods	1,125	.....	11,129	.....	10	4/1	12	.....
		S. J. Crowe	.....	683	.....	9,012	5	4/1	12	.....
University Hospital ★†	Baltimore	C. C. Clapp and E. Looper	8	953	4,318	1,982	1	4/1	15	75.00
Beth Israel Hospital ★	Boston	L. Arkin and L. M. Freedman	.....	650	.....	2,392	1	4/1	12	79.16
Boston City Hospital ★†	Boston	H. Schwartzman	532	.....	17,600	.....	1	.....	12	50.00
		E. J. Monahan	.....	1,579	.....	12,217	1	.....	12	50.00
Lahey Clinic	Boston	W. B. Hoover	.....	825	.....	10,000	2	Varies	12-36	125.00
Massachusetts Eye and Ear Infirmary [4]	Boston	P. A. Chandler	2,982	.....	40,473	.....	8	.....	12-24	.....
		L. A. Schall	.....	3,154	.....	30,122	8	.....	12-24	.....
†Massachusetts Memorial Hospital ★	Boston	L. F. Johnson	.....	.....	.....	1,965	1	4/1	12	50.00
Memorial Hospital ★	Worcester, Mass.	G. Berry	.....	1,724	.....	859	1	7/1	12-24	83.33
University Hospital ★†	Ann Arbor, Mich.	F. B. Fralick	686	.....	7,569	.....	6	.....	12-24	101.00
		A. C. Furstenberg	.....	775	.....	7,672	4	.....	12-24	101.00
City of Detroit Receiving Hospital ★†	Detroit	F. Heath and J. M. Robb	966		8,431		4	4/1	12-18	145.57
Grace Hospital ★	Detroit	N. I. Bentley	1,823		2,330		2	4/1	12-36	125.00

Numerical and other references will be found on page 1354.

12. OPHTHALMOLOGY AND OTOLARYNGOLOGY—Continued

Name of Hospital	Location	Chief of Service	Residencies Approved	Inpatients Treated [6] Oph	Inpatients Treated [6] Otol	Outpatient Visits Oph	Outpatient Visits Otol	Asst. Res. and Residencies [5]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Harper Hospital [*4]	Detroit	P. Heath and J. M. Robb	OpOt	983	3,119	.....	.....	4	.....	12	.....
Henry Ford Hospital [*4]	Detroit	E. L. Whitney	Oph	333	.....	15,506	.....	3	.....	12-36	$175.00
		J. L. Dill	Otol	.....	1,204	.....	15,825	3	.....	12-36	175.00
Shurly Hospital [4]	Detroit	M. J. Wainger and B. R. Shurly	OpOt	150	266	5,600	1,982	3	.....	12	.....
Wayne County General Hospital and Infirmary [*4]	Eloise, Mich	R. Beattie	OpOt	383		903		2	7/1	12	172.50
Minneapolis General Hospital [*4]	Minneapolis	W. K. Haven	OpOt	241		3,815		2	1/1, 7/1	12-36	91.50
University Hospitals [*4]	Minneapolis	E. Hansen	Oph	225	.....	4,332	.....	2	.....	12	.....
		L. R. Boles	Otol	.....	274	.....	3,448	2	7/1	12-36	91.50
Mayo Foundation	Rochester, Minn	W. L. Benedict	Oph	.....	.....	.....	.....	8	.....	12	.....
		H. I. Lillie	Otol	(See page 1354)				10	.....	12	.....
Ancker Hospital [*]	St. Paul	J. J. Hochfilzer	OpOt	74	293	1,829	1,169	2	1/1	12-24	91.50
Charles T. Miller Hospital [*]	St. Paul	F. E. Burch	Oph	1,207	.....	5,568	.....	2	.....	12	.....
Children's Mercy Hospital [4]	Kansas City, Mo	R. J. Curdy	OpOt	34	466	981	1,306	1	.....	12	.....
Kansas City General Hospital [*]	Kansas City, Mo	L. E. Williams	OpOt	.....	59	113	361	2	.....	12	.....
Barnes Hospital [*4]	St. Louis	L. T. Post	Oph	1,282	.....	14,911	.....	5	7/1	12-36	30.00
		T. Walsh	Otol	.....	2,448	.....	10,940	8	7/1	12-24	100.00
Homer G. Phillips Hospital [*]	St. Louis	W. H. Meinberg and T. Walsh	OpOt	133	323	2,218	2,051	3	10/1	12	80.00
Jewish Hospital [*4]	St. Louis	S. B. Westlake	Otol	.....	.....	.....	.....	1	.....	12	.....
St. Louis City Hospital [*4]	St. Louis	V. T. Post	Oph	112	.....	2,682	.....	2	4/1	12-36	80.00
		A. C. Stutsman	Otol	.....	407	.....	1,656	2	4/1	12-36	80.00
St. Mary's Group of Hospitals [*]	St. Louis	W. H. Luedde	Oph	122	.....	3,548	.....	3	.....	12-36	35.00
		B. J. McMahon	Otol	.....	758	.....	3,126	3	.....	12-36	35.00
University of Nebraska Hospital [*]	Omaha	J. H. Judd	Oph	124	.....	1,071	.....	3	7/1	12-36	50.00
Jersey City Hospital [*4]	Jersey City, N. J	F. X. Brophy and M. G. Borrone	OpOt	648	1,149	2,591	3,416	6	.....	12-24	.....
Newark City Hospital [*]	Newark, N. J		Otol	.....	.....	.....	.....	1	.....	12	.....
Newark Eye and Ear Infirmary	Newark, N. J	R. H. Rogers and W. M. Brien	OpOt	867	204	6,258	2,597	3	2/1, 6/1	12	.....
Albany Hospital [*4]	Albany, N. Y	H. K. Tebbutt Jr	Otol	.....	949	.....	956	2	4/1	12	25.00
Brooklyn Eye and Ear Hospital	Brooklyn	J. N. Evans	Oph	2,216	.....	38,221	.....	8	.....	24	.....
		J. P. Baker	Otol	.....	5,027	.....	36,194	8	.....	24	.....
Jewish Hospital [*4]	Brooklyn	E. L. Berger	Otol	.....	272	.....	3,323	1	7/1	12	25.00
Kings County Hospital [*4]	Brooklyn	W. Moehle	Oph	402	.....	8,418	.....	2	7/1	12-24	25.00
		M. C. Myerson	Otol	.....	1,137	.....	4,793	3	7/1	12-24	25.00
Long Island College Hospital [*4]	Brooklyn	J. N. Evans	Oph	181	.....	3,723	.....	5	7/1	48	25.00
		R. L. Moorhead	Otol	.....	457	.....	1,749	2	7/1	12-24	25.00
Buffalo General Hospital [*]	Buffalo	C. Cott	Otol	.....	839	.....	567	2	4/1	12-36	25.00
Edward J. Meyer Memorial Hospital [*]	Buffalo	L. J. Koenig	Oph	100	.....	2,334	.....	3	.....	36	50.00
		H. E. Bozer	Otol	.....	67	.....	961	3	.....	36	50.00
Queens General Hospital [*4]	Jamaica, N. Y	W. G. Frey	Oph	131	.....	2,576	.....	1	.....	12	70.00
		M. S. Bender	Otol	.....	457	.....	2,171	2	.....	12	70.00
New Rochelle Hospital [*]	New Rochelle, N. Y	J. L. Beck	OpOt	821	.....	1,623	.....	2	8/1	12	125.00
Bellevue Hospital, Div. III—N. Y. Univ. [*4]	New York City	D. B. Kirby	Oph	563[b]	.....	15,742[b]	.....	6	Varies	12	25.00
		J. W. Fowlkes	Otol	.....	2,360[b]	.....	15,531[b]	6	Varies	12	25.00
†Bronx Eye and Ear Infirmary	New York City	C. H. Smith	Otol	.....	.....	.....	.....	2	1/1	12	30.00
Flower and Fifth Avenue Hospitals [*]	New York City	J. A. W. Hetrick	Otol	.....	478	.....	2,130	2	.....	12	.....
Goldwater Memorial Hospital [*4]	New York City	J. W. Smith	Oph	34	.....	.....	.....	2	4/1	12	50.00
Harlem Eye and Ear Hospital	New York City	C. B. Meding and E. Grabscheid	OpOt	498	1,428	15,355	15,219	3	.....	12	.....
Harlem Hospital [*4]	New York City	H. J. Burman	Otol	.....	.....	.....	.....	1	7/1	12	100.00
Lenox Hill Hospital [*4]	New York City	J. J. Reid	Oph	588	.....	5,326	.....	Varies	12-24	50.00	
Manhattan Eye, Ear and Throat Hosp. [4]	New York City		Oph	2,281	.....	60,866	.....	7	.....	24-30	.....
			Otol	.....	8,947	.....	51,635	8	.....	24	.....
Metropolitan Hospital [*4]	New York City	C. A. Turtz	Oph	74	.....	2,647	.....	1	7/1	12	100.00
		J. A. W. Hetrick	Otol	.....	329	.....	3,066	1	7/1	12	100.00
Mount Sinai Hospital [*4]	New York City		Oph	.....	.....	.....	.....	1	7/1	24	50.00
			Otol	.....	.....	.....	.....	2	7/1	24	50.00
New York City Hospital [*]	New York City	O. C. Risch	Otol	.....	656	.....	3,420	1	7/1	12	100.00
New York Eye and Ear Infirmary [4]	New York City	W. P. Eagleton	Oph	3,151	.....	59,706	.....	12	1/1, 4/1	24-33	.....
		R. Swain	Otol	.....	3,333	.....	52,545	12	7/1, 10/1	24-33	.....
New York Polyclinic Medical School and Hospital [*]	New York City		OpOt	163	973	.....	.....	4	4/1	12	25.00
New York Post-Graduate Medical School and Hospital [*]	New York City	J. W. White	Oph	319	.....	6,549	.....	3	7/1	24	15.00
		A. Nilsen	Otol	.....	710	.....	6,540	4	7/1	24	15.00
Presbyterian Hospital [*4]	New York City	J. M. Dunnington	Oph	2,671	.....	27,807	.....	6	.....	12	41.67
		J. D. Kernan	Otol	.....	1,851	.....	19,959	6	.....	12	41.67
Roosevelt Hospital [*]	New York City	C. N. Harper	Otol	.....	885	.....	2,282	2	.....	12-24	86.66
St. Luke's Hospital [*]	New York City	W. G. Frey	Oph	103	.....	7,225	.....	1	7/1	12-18	50.00
		J. W. Fowlkes	Otol	.....	1,156	.....	7,981	3	7/1	12-36	50.00
Rochester General Hospital [*4]	Rochester, N. Y	E. W. Kennedy and C. S. Nash	OpOt	138	654	714	1,155	2	7/1	12-24	85.00
Strong Memorial and Rochester Municipal Hospitals [*4]	Rochester, N. Y	J. F. Gipner	Oph	310	.....	4,620	.....	2	7/1	12-24	41.66
		C. A. Heatley	Otol	.....	1,174	.....	4,070	2	7/1	12-24	41.66
Sea View Hospital [4]	Staten Island, N. Y	M. C. Myerson	Otol	.....	2,657	.....	.....	2	1/1, 7/1	12	120.00
Syracuse University Medical Center [*]	Syracuse, N. Y	M. G. Brown	Otol	.....	.....	.....	.....	1	.....	12	.....
Grasslands Hospital [*4]	Valhalla, N. Y	A. Filak-Perez	Oph	60	.....	1,717	.....	2	1/1	12-24	75.00
		M. Smith	Otol	.....	96	.....	1,003	2	1/1	12-24	75.00
Duke Hospital [*4]	Durham, N. C	W. B. Anderson and W. W. Eagle	OpOt	413	662	6,164	9,102	10	4/1	12	83.33
Cincinnati General Hospital [*]	Cincinnati	H. Reid	Oph	359	.....	4,902	.....	2	4/1	12-24	.....
		H. Goodyear	Otol	.....	827	.....	3,670	2	4/1	12-24	.....
City Hospital [*4]	Cleveland	G. L. Miller	Oph	148	.....	2,698	.....	1	7/1	12	75.00
		C. W. Engler	Otol	.....	198	.....	1,577	2	7/1	12	50.00
Cleveland Clinic Foundation Hospital	Cleveland	F. Moore	Otol	.....	613	.....	11,911	4	1/1, 7/1	12-36	100.00
St. Luke's Hospital [*]	Cleveland	T. W. Thoburn	Otol	.....	2,003	.....	1,465	2	4/1	12	50.00
University Hospitals [*4]	Cleveland	M. W. Jacoby	Oph	202	.....	1,128	.....	1	7/1	12	50.00
		A. B. Bruner	Otol	.....	.....	.....	.....	2	4/1	12	24.96
		C. Pitklin	Otol	.....	.....	.....	.....	2	4/1	12	24.96
Starling-Loving University Hospital [*]	Columbus, Ohio	C. S. Perry	Oph	202	.....	1,559	.....	2	4/1	12-18	50.00
		H. C. Beatty	Otol	.....	286	.....	1,294	2	4/1	12-18	50.00
University Hospitals [*]	Oklahoma City, Okla	J. P. McGee and T. G. Walls	OpOt	247	477	2,721	1,781	2	4/1	12-18	75.00
University of Oregon Medical School Hospitals and Clinics [*4]	Portland, Ore	K. Swan	Oph	144	.....	5,524	.....	3	.....	12-36	75.00
		R. Fenton	Otol	.....	365	.....	3,180	3	.....	12-36	75.00

Numerical and other references will be found on page 1354.

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12. OPHTHALMOLOGY AND OTOLARYNGOLOGY—Continued

Name of Hospital	Location	Chief of Service	Residencies Approved	Inpatients Treated [6]		Outpatient Visits		Asst. Res. and Residencies [5]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
				Oph	Otol	Oph	Otol				
George F. Geisinger Memorial Hospital *[4]	Danville, Pa.	C. H. Jacobs	Oph	204	.....	5,235	.....	1	4/1	12	$ 75.00
		F. W. Davison	Otol	.....	818	.....	8,096	1	11/1	12	75.00
Graduate Hospital of the University of Pennsylvania *	Philadelphia	E. Spaeth	Oph	438	.....	3,252	.....	1	7/1	12-24	.....
		R. Butler	Otol	.....	1,493	.....	3,494	3	7/1	12-24	.....
Hosp. of the Protestant Episcopal Church *[4]	Philadelphia	J. A. Bertolet and O. C. Hurst	Otol	.....	544	.....	2,456	1	.....	12	50.00
Hospital of the Univ. of Pennsylvania *[4]	Philadelphia	F. H. Adler	Oph	579	.....	5,075	.....	5	4/1	12-36	.....
Jefferson Medical College Hospital *	Philadelphia	H. J. Williams and L. H. Clerf	Otol	.....	2,370	.....	10,149	1	.....	12	.....
Philadelphia General Hospital *[4]	Philadelphia		Oph	91	.....	.....	.....	1	4/1	12-36	70.00
Temple University Hospital *[4]	Philadelphia	W. I. Lillie	Oph	328	.....	2,545	.....	4	.....	36	50.00
		M. S. Ersner and R. F. Ridpath	Otol	.....	739	.....	1,430	3	.....	36	50.00
Wills Hospital [4]	Philadelphia	F. C. Parker	Oph	3,862	.....	27,507	.....	9	.....	18	.....
Eye, Ear, Nose and Throat Hospital [4]	Pittsburgh	J. G. Linn and J. H. McTrendy	OpOt	1,096	3,928	9,231		4	.....	18	20.00
Mercy Hospital *[4]	Pittsburgh	W. L. Allison	Otol	.....	2,233	.....	808	1	4/1	12-36	.....
Knoxville General Hospital *	Knoxville, Tenn.		OpOt	378		548		1	.....	12	.....
Memphis Eye, Ear, Nose and Throat Hosp.	Memphis, Tenn.	E. C. Ellett and L. Levy	OpOt	3,162		7,943		4	.....	12	.....
Nashville General Hospital *[4]	Nashville, Tenn.	J. Gordon Jr.	OpOt	407		3,763		2	1/1, 4/1	12	100.00
Vanderbilt University Hospital *[4]	Nashville, Tenn.		Otol	.....	.....	.....	.....	1	.....	12	.....
Parkland Hospital *[4]	Dallas, Tex.	G. Jones and J. D. Singleton	OpOt	.....	.....	.....	.....	1	.....	12	50.00
John Sealy Hospital *[4]	Galveston	J. M. Robison	Otol	.....	367	.....	2,903	2	.....	12	.....
Jefferson Davis Hospital *[4]	Houston, Tex.	F. J. Slataper	Oph	374	.....	2,270	.....	1	7/1	12-36	50.00
		W. J. Snow	Otol	.....	388	.....	2,156	1	7/1	12-36	50.00
University of Virginia Hospital *[4]	Charlottesville, Va.	E. Burton and F. W. Woodward	OpOt	187	1,179	3,543	4,286	11	7/1	12	25.00
Medical College of Virginia, Hosp. Div. *[4]	Richmond, Va.	R. H. Courtney and P. N. Pastore	OpOt	255	458	3,961	2,365	4	4/1	12	37.50
Gill Mem. Eye, Ear and Throat Hospital [4]	Roanoke, Va.	E. G. Gill	OpOt	125	1,171	7,482	6,102	2	.....	12-24	150.00
King County Hospital *	Seattle	J. Weber	OpOt	.....	537[b]	677[b]	1,829[b]	2	.....	12	.....
State of Wisconsin General Hospital *[4]	Madison	F. A. Davis and W. Nesbit	OpOt	1,111		2,364		4	7/1	36	25.00
Milwaukee County Hospital *[4]	Milwaukee	T. F. McCormick and W. E. Grove	OpOt	1,082	509	3,358	1,303	4	4/1	12-36	68.22

Hospitals, 128; Assistant Residencies and Residencies, 600

13. ORTHOPEDIC SURGERY

The following services are approved by the Council and the American Board of Orthopedic Surgery (See footnotes ½ to 3 and 14)

United States Army.—Residencies available to medical officers U. S. Army

†Letterman General Hospital *2 (AFS)—San Francisco
†Fitzsimons General Hospital *2 (AFS)—Denver
†Walter Reed General Hospital *2 (AFS)—Washington, D. C.
†Madigan General Hospital *2 (AFS)—Fort Lewis, Wash.
†Percy Jones General Hospital *2 (AFS)—Battle Creek, Mich.
†William Beaumont General Hospital *2 (AFS)—El Paso, Tex.
†Brooke General Hospital *2 (AFS)—San Antonio, Tex.

United States Navy.—Residencies available to medical officers U. S. Navy

†U. S. Naval Hospital *1½ (AF)—Long Beach, Calif.
†U. S. Naval Hospital *2 (AFS)—Oakland, Calif.
†U. S. Naval Hospital *1½ (AF)—San Diego, Calif.
†U. S. Naval Hospital *1½ (AF)—Great Lakes, Ill.
U. S. Naval Hospital *1½ (AF)—Bethesda, Md.
†U. S. Naval Hospital *2 (AFS)—Chelsea, Mass.
†U. S. Naval Hospital *2 (AFS)—St. Albans, N. Y.
U. S. Naval Hospital *2 (AFS)—Philadelphia

Name of Hospital	Location	Chief of Service	Type of Training [14]	Inpatients Treated [6]	Outpatient Visits	Deaths	Autopsies	Asst. Res. and Residencies [5]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Jefferson and Hillman Hospitals *[3]	Birmingham, Ala.	J. D. Sherrill	ACFS	1,060	1,911	18	6	2	7/1	12-36	$ 50.00
Children's Hospital [1-4]	Los Angeles	J. Wilson	C	419	2,516	1	1	1	.....	12	.....
Los Angeles County Hospital *[2-4]	Los Angeles	A. E. Gallant	ACFS	3,951	21,305	212	11	5	4/1, 7/1	12-24	157.20
Orthopaedic Hospital [2]	Los Angeles	C. L. Lowman	ACFS	2,416	29,024	..	..	3	3/1	12-36	150.00
White Memorial Hospital *[2]	Los Angeles	G. M. Taylor	AFS	489	5,956	..	..	1	4/1	12	31.00
Highland-Alameda County Hospital *[2-4]	Oakland, Calif.	C. B. Fowler	ACFS	551	1,081	50	4	1	7/1	12-36	60.00
Samuel Merritt Hospital [2]	Oakland, Calif.	H. H. Hitchcock	AFS	992	7,131	19	..	1	7/1	12-24	75.00
Children's Hospital *[1-4]	San Francisco	L. C. Abbott	C	.....	.....	..	..	2	.....	12	.....
Franklin Hospital *[1-4]	San Francisco	L. C. Abbott and F. C. Bost	A	1,305	.....	7	6	4	7/1	12	200.00
San Francisco Hospital *[1½, 4]	San Francisco	F. C. Bost	AF	275	.....	3	1	1	.....	12	150.00
Shriners Hospital for Crippled Children [1-4]	San Francisco	F. C. Bost	C	40	2,012	0	..	2	4/1	12	100.00
†Stanford University Hospitals *[1-4]	San Francisco	D. E. King	A	627	3,330	5	2	1	7/1	12-24	50.00
University of California Hospital *[1-4]	San Francisco	L. C. Abbott	A	210	500	1	1	2	Varies	12	65.00
†Santa Clara County Hospital *[1½, 4]	San Jose, Calif.	J. B. Josephson	AF	276	1,973	17	..	1	7/1	12	165.00
Children's Hospital [1-4]	Denver	A. Thomas	C	349	.....	4	3	2	4/1	12	100.00
Denver General Hospital *[1½]	Denver	F. E. Rogers	AS	1,539	3,472	71	36	2	7/1	12-24	50.00
†St. Luke's Hospital *[1]	Denver	R. G. Packard	A	546	782	11	2	1	7/1	12-36	50.00
†Corwin Hospital *[½]	Pueblo, Colo.	D. W. Boyer	F	658	13,487	13	1	1	.....	12	.....
†Hartford Hospital *[2, 4]	Hartford, Conn.	J. H. T. Sweet Jr.	AFS	1,714	.....	8	4	1	Varies	12-36	50.00
Grace-New Haven Community Hospital New Haven Unit *[1-4]	New Haven, Conn.	M. Eveleth	A	505	9,987	..	..	3	4/1	12	*
Newington Home for Crippled Children [1]	Newington, Conn.	R. M. Yergason	C	275	5,402	1	..	2	7/1	12	200.00
Alfred I. du Pont Institute of The Nemours Foundation [1]	Wilmington, Del.	A. R. Shands Jr.	C	145	1,766	0	..	1	7/1	12	.....
Central Dispensary and Emergency Hospital *[1-4]	Washington, D. C.	G. W. Leadbetter	A	1,106	1,311	12	1	3	4/1	12	50.00
Freedmen's Hospital *[2-4]	Washington, D. C.	J. Nevlaser	ACFS	234	3,939	16	4	1	7/1	12-36	50.00
Gallinger Municipal Hospital *[2-4]	Washington, D. C.		AC	353	3,287	20	2	2	3/1	12-24	75.00
†James M. Jackson Memorial Hospital *[1]	Miami, Fla.	F. A. Vogt	A	1,216	.....	29	10	1	4/1	12	83.00
Scottish Rite Hosp. for Crippled Children [1]	Decatur, Ga.	J. H. Kite	C	262	.....	0	..	1	.....	12	.....
Georgia Warm Springs Foundation [1]	Warm Springs, Ga.	C. E. Irwin	C	630	.....	0	..	2	.....	12	.....
Children's Memorial Hospital [1-4]	Chicago	E. L. Compere	C	.....	1,554	1	1	2	1/1	12	75.00
Cook County Hospital *[1½, 4]	Chicago	E. J. Berkheiser	A	486	6,979	19	3	3	Varies	12-36	25.00
		W. Cubbins	F	2,704	6,388	213	4	4	Varies	12-36	25.00

Numerical and other references will be found on page 1354.

13. ORTHOPEDIC SURGERY—Continued

Name of Hospital	Location	Chief of Service	Type of Training [14]	Inpatients Treated [6]	Outpatient Visits	Deaths	Autopsies	Asst. Res. and Residencies [6]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Michael Reese Hospital [*2,4]	Chicago	R. B. Bettman	AC	245	2,008	1	1	4	.....	12-36	.....
Research and Educational Hospitals [*3]	Chicago	F. A. Chandler	ACFS	346	16,674	5	3	3	.....	12-36	$ 50.00
St. Luke's Hospital [*1,4]	Chicago	F. A. Chandler	A	617	991	6	5	2	7/1	12-36	25.00
Shriners Hospital for Crippled Children [1,4]	Chicago	M. A. Page	C	296	2,104	2	1	3	7/1	12	75.00
University of Chicago Clinics [*2,4]	Chicago	C. H. Hatcher	ACFS	530	5,475	7	7	5	Varies	12-36	25.00
Wesley Memorial Hospital [*2,4]	Chicago	E. L. Compere	AFS	784	.....	0	..	2	Varies	12-36	25.00
†Evanston Hospital [*½,4]	Evanston, Ill.	V. C. Turner	F	697	2,296	..	..	2	1/1, 7/1	12-36	50.00
St. Francis Hospital [*1]	Evanston, Ill.	J. J. Fahey	A	697	.....	..	..	1	.....	12	.....
Indianapolis City Hospital [*1½]	Indianapolis	F. W. Teague	AF	770	6,500	52	4	4	.....	12-36	60.00
Indiana University Medical Center [*2,4]	Indianapolis	L. A. Ensminger	ACFS	1,102	6,150	3	1	3	4/1	12-36	33.33
†Methodist Hospital [*1]	Indianapolis	E. B. Mumford	A	721	.....	0	..	1	.....	12	180.00
University Hospitals [*2½,4]	Iowa City	A. Steindler	ACS	3,238	4,560	6	2	10	7/1	12	40.00
†University of Kansas Hospitals [*]	Kansas City, Kan.	J. B. Weaver	A	433	1,380	17	6	1	7/1	12-36	50.00
St. Francis Hospital [*]	Wichita, Kan.	C. Rombold	A	513	.....	5	2	1	7/1	12	100.00
Kosair Crippled Children's Hospital [1]	Louisville, Ky.	W. B. Owen	C	240	.....	..	..	3	1/1	12	.....
Louisville General Hospital [*2]	Louisville, Ky.	W. B. Owen	AFS	971	5,705	50	3	1	4/1	12-24	75.00
Charity Hospital of Louisiana [*]	New Orleans								(See units below)		
Louisiana State University Unit [*3]	New Orleans	H. T. Simon	ACFS	585[b]	4,580[b]	32[b]	4[b]	6	Varies	12-36	25.00
Tulane University Unit [*3]	New Orleans	G. A. Caldwell	ACFS	579[b]	4,533[b]	21[b]	1[b]	6	Varies	12-36	25.00
Independent Unit [*3]	New Orleans		ACFS	395[b]	3,445[b]	25[b]	1[b]	6	Varies	12-36	25.00
†Touro Infirmary [*]	New Orleans	G. A. Caldwell	AFS	753	965	2	1	1	7/1	12-36	25.00
Shriners Hospital for Crippled Children [1]	Shreveport, La.	H. A. Durham	C	105	828	0	..	2	.....	12-24	150.00
James Lawrence Kernan Hospital for Crippled Children [1]	Baltimore	A. F. Voshell	C	208	3,255	3	0	2	7/1	12	92.00
Johns Hopkins Hospital [*2]	Baltimore	G. E. Bennett	AFS	683	9,612	9	2	4	4/1	12	.....
†U. S. Marine Hospital [*]	Baltimore	J. D. Lane Jr.	A	684	.....	4	3	1	.....	12	.....
Boston City Hospital [*1½,4]	Boston	O. J. Hermann	AF	1,267	12,937	29	26	2	.....	12	50.00
Children's Hospital [*1,4]	Boston	F. R. Ober	C	390	15,614	1	..	5	Varies	12	.....
Lahey Clinic [2]	Boston	G. E. Haggart	AC	600	8,000	2	1	4	Varies	12-24	125.00
Massachusetts General Hospital [*]	Boston	M. N. Smith Peterson	AFS	.....	.....	..	..	1	.....	12	.....
†Lakeville State Sanatorium [1]	Middleboro, Mass.	L. A. Alley	AC	73	393	5	..	2	.....	12	185.00
Shriners Hospital for Crippled Children [1,4]	Springfield, Mass.	G. de N. Hough	C	244	2,332	0	..	3	.....	12	50.00
Worcester City Hospital [*]	Worcester, Mass.	J. W. O'Meara	A	764	1,396	30	3	2	4/1	12	50.00
University Hospital [*3]	Ann Arbor, Mich.	C. E. Badgley	ACFS	1,310	6,821	9	5	6	.....	12	101.00
City of Detroit Receiving Hospital [*1½,4]	Detroit	A. D. LaFerte	AF	1,104	8,339	34	5	2	4/1	12-18	145.57
Henry Ford Hospital [*2,4]	Detroit	C. L. Mitchell	ACFS	1,256	14,986	3	0	3	4/1	12-36	175.00
†Blodgett Memorial Hospital [*2]	Grand Rapids, Mich.	J. T. Hodgen	AC	608	3,949	8	4	1	7/1	12	.....
Borgess Hospital [½]	Kalamazoo, Mich.	H. Stryker	AF	412	1,922	5	2	1	.....	12	.....
†University Hospitals [*1,4]	Minneapolis	W. Cole	A	213	1,610	6	3	1	7/1	12-36	91.50
Mayo Foundation [3]	Rochester, Minn.	M. S. Henderson and R. K. Ghormley	ACFS	(See page 1354)				16	.....	12	.....
Gillette State Hospital for Crippled Children [1,4]	St. Paul	C. C. Chatterton	C	696	6,719	6	6	5	7/1	12	91.50
University Hospitals [1]	Columbia, Mo.	W. J. Stewart	C	780	1,592	2	1	1	7/1	12-24	50.00
Kansas City General Hospital [*1½]	Kansas City, Mo.	H. L. Hess	AF	636	6,377	72	25	2	.....	12	75.00
St. Luke's Hospital [*]	Kansas City, Mo.	F. Dickson	A	734	9,373	14	1	1	10/1	12-36	75.00
Barnes Hospital [*]	St. Louis	J. A. Key	ACFS	613	2,119	12	4	1	7/1	12-36	150.00
St. Mary's Group of Hospitals [*]	St. Louis	A. O'Reilly	ACFS	617	4,070	10	..	4	.....	12-36	35.00
Shriners Hospital for Crippled Children [1]	St. Louis	R. D. Heuth	C	396	.....	..	..	1	.....	12	.....
Nebraska Orthopedic Hospital [1,4]	Lincoln, Nebr.	R. W. Orr	C	634	1,630	3	1	1	12/1	12-24	125.00
University of Nebraska Hospital [*]	Omaha	R. D. Schrock	A	183	.....	1	1	1	4/1	12	50.00
Jersey City Hospital [*1½,4]	Jersey City, N. J.	S. B. Sprague	AF	1,012	7,039	18	4	6	.....	12-24	.....
Monmouth Memorial Hospital [*1,4]	Long Branch, N. J.	N. S. Ransohoff	A	462	8,216	16	4	2	.....	12-24	.....
Hospital and Home for Crippled Children [1]	Newark, N. J.	A. Stahl	C	441	.....	3	..	1	.....	12	150.00
New Jersey Orthopedic Hosp. and Disp. [½]	Orange, N. J.	H. W. Smith	AF	710	16,672	1	0	3	.....	12-18	90.00
Orthopedic Hospital and Dispensary [1]	Trenton, N. J.	R. B. Ernest	C	221	1,089	2	0	1	.....	12	.....
†Albany Hospital [*1,4]	Albany, N. Y.	J. W. Ghormley	A	71	218	2	1	1	4/1, 7/1	12	25.00
Binghamton City Hospital [*]	Binghamton, N. Y.	C. M. Allaben	A	705	559	0	..	1	7/1	12-24	50.00
†House of St. Giles the Cripple [1,4]	Brooklyn	J. B. L'Episcopo	C	208	2,586	..	..	1	7/1	12-36	100.00
Kings County Hospital [*3]	Brooklyn	J. B. L'Episcopo	ACFS	439	7,908	5	0	3	7/1	12-36	25.00
Long Island College Hospital [*2,4]	Brooklyn	J. B. L'Episcopo	AFS	265	8,099	3	..	3	4/1	12-36	50.00
†St. Charles Hospital Orthopedic Clinic [1]	Brooklyn	H. C. Fett	C	186	2,752	2	..	1	7/1	12-36	.....
Buffalo General Hospital [*2]	Buffalo	F. N. Potts	AFS	625	308	16	3	3	4/1	12-36	25.00
Edward J. Meyer Memorial Hospital [*2,4]	Buffalo	A. A. Gartner	AFS	183	727	2	1	1	Varies	12-36	50.00
†Millard Fillmore Hospital [*]	Buffalo	A. A. Gartner	A	636	.....	13	3	1	4/1	12-48	50.00
†Meadowbrook Hospital [*1,4]	Hempstead, N. Y.	O. C. Hudson	A	538	.....	30	8	6	7/1	12	100.00
Bellevue Hospital, Div. IV—Open Div. [*2½]	New York City	A. Krida	ACF	286[b]	6,686[b]	7[b]	1[b]	4	Varies	12	25.00
†Flower and Fifth Avenue Hospitals [*1½,4]	New York City	A. H. Bingham	AF	273	1,042	4	..	1	7/1	12-24	50.00
Hospital for Joint Diseases [*1,4]	New York City		ACFS	2,270	34,948	20	3	12	.....	12	.....
Hospital for Special Surgery [3]	New York City	P. D. Wilson	ACFS	1,131	21,283	5	1	10	Varies	12-24	50.00
Lenox Hill Hospital [*1½,4]	New York City	W. I. Galland and A. Wiesenthal	AF	300	2,854	3	..	1	Varies	12	50.00
Metropolitan Hospital [*2,4]	New York City	M. J. Wilson	ASF	602	1,986	30	2	1	7/1	12	100.00
Mount Sinai Hospital [*2,4]	New York City	K. Lippmann	ASF	.....	.....	..	..	2	7/1	12-24	50.00
New York Orthopaedic Disp. and Hosp. [3]	New York City	A. De F. Smith	ACS	1,100	.....	4	2	15	.....	12	41.66
Presbyterian Hospital [*½,4]	New York City	C. R. Murray	F	451	10,979	3	..	4	.....	12	41.67
St. Luke's Hospital [*]	New York City	D. M. Bosworth	ACFS	689	4,112	11	2	2	7/1	12-36	50.00
Sydenham Hospital [*1,4]	New York City	J. G. Wishner	A	333	1,450	4	..	1	Varies	12-18	50.00
Genesee Hospital [*1½]	Rochester, N. Y.		AF	601	1,000	6	2	1	.....	12	.....
†Rochester General Hospital [*1,4]	Rochester, N. Y.	H. B. Crawford	A	671	2,274	14	10	1	Varies	12-24	85.00
Strong Memorial and Rochester Municipal Hospitals [*2,4]	Rochester, N. Y.	R. P. Schwartz	AFS	563	4,413	..	..	2	7/1	12-24	41.66
†U. S. Marine Hospital [*1½]	Stapleton, L. I.	A. A. Michele	AF	2,881	20,085	4	4	..	7/1	12	.....
Sea View Hospital [½,4]	Staten Island, N. Y.	D. M. Bosworth	A	270	.....	21	2	2	1/1, 7/1	12	120.00
†St. Vincent's Hospital [*1,4]	Staten Island, N. Y.	D. M. Bosworth	A	325	1,500	13	13	1	7/1	12	50.00
New York State Reconstruction Home [1,4]	W. Haverstraw, N. Y.	H. Hallock	C	477	.....	1	..	3	1/1, 7/1	12-24	.....
Charlotte Memorial Hospital [*1,4]	Charlotte, N. C.	O. L. Miller	A	1,504	517	16	8	1	.....	12-36	75.00
Duke Hospital [*1,13]	Durham, N. C.	L. D. Baker	ACFS	762	9,838	8	3	5	4/1	12	83.33
North Carolina Orthopedic Hospital [1]	Gastonia, N. C.	W. L. Roberts	C	361	.....	5	..	1	.....	12	41.66
†North Carolina Baptist Hospital [*1,4]	Winston-Salem, N. C.	R. A. Moore	A	328	2,146	8	4	1	7/1	12-36	41.66
†Children's Hospital [1]	Akron, Ohio	W. A. Hoyt	C	556	6,340	3	0	1	7/1	12-24	165.00
†City Hospital [*1½]	Akron, Ohio	H. R. Conn	AF	1,204	3,050	42	15	1	7/1	12-24	165.00
Cincinnati General Hospital [*2]	Cincinnati	J. A. Freiberg	AFS	529	3,514	3	..	4	4/1	12-24	.....
Jewish Hospital [*]	Cincinnati	J. A. Freiberg	A	508	.....	10	1	1	4/1	12	.....
Cleveland Clinic Foundation Hospital [2½]	Cleveland	J. A. Dickson	ACS	442	9,478	3	1	6	1/1, 7/1	12-36	100.00
Mount Sinai Hospital [*1½,4]	Cleveland	R. S. Reich	AF	735	1,263	12	3	1	4/1	12	100.00

Numerical and other references will be found on page 1354.

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13. ORTHOPEDIC SURGERY—Continued

Name of Hospital	Location	Chief of Service	Type of Training [14]	Inpatients Treated [6]	Outpatient Visits	Deaths	Autopsies	Asst. Res. and Residencies [8]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
St. Luke's Hospital *[1-5]	Cleveland	T. A. Willis	A	893	1,619	26	8	3	7/1	12-36	$ 50.00
University Hospitals *[2-5]	Cleveland	M. Harbin	AFS	.....	.....	..	..	1	4/1	12	25.00
Children's Hospital [3-5]	Columbus, O.	E. H. Wilson	C	511	1,546	1	..	1	.....	12	.....
Mount Carmel Hospital *[2]	Columbus, O.	E. H. Wilson	AFS	957	1,265	14	5	2	1/1	12	100.00
†White Cross Hospital *[3]	Columbus, O.	J. D. Wilson	A	641	1,500	4	..	2	7/1	12	100.00
St. Vincent's Hospital *[1-5]	Toledo, O.	B. J. Heln	A	1,017	4,241	10	1	1	.....	12	.....
Youngstown Hospital *[1½]	Youngstown, O.	R. R. Morrell	AF	753	830	9	5	1	4/1	12	125.00
Bone and Joint Hospital-McBride Clinic 1½	Oklahoma City	E. D. McBride	AF	2,280	....	..	..	2	1/2	12	175.00
St. Anthony Hospital *[3]	Oklahoma City	W. K. West	A	1,022	.....	49	15	1	.....	12	.....
University Hospitals *[3]	Oklahoma City	W. K. West	ACFS	898	6,921	11	1	6	4/1	12-18	75.00
Emanuel Hospital *[1-5]	Portland, Ore.	L. S. Lucas	A	1,396	.....	28	14	2	4/1	12	75.00
Shriners Hospital for Crippled Children [1-5]	Portland, Ore.	L. S. Lucas	C	365	.....	..	..	1	7/1	12	100.00
University of Oregon Medical School Hospitals and Clinics *[2-5]	Portland, Ore.	L. S. Lucas	AFS	446	7,416	24	7	3	Varies	12-36	75.00
State Hospital for Crippled Children [1-5]	Elizabethtown, Pa.	T. Outland	C	222	926	2	..	4	4/1	12-24	225.00
Hamot Hospital *[1½]	Erie, Pa.	A. G. Davis	AF	855	1,572	11	3	2	.....	12	.....
Hosp. of the Univ. of Pennsylvania *[3-5]	Philadelphia	P. C. Colonna	ACFS	640	6,885	7	7	6	4/1	12-36	40.00
Jefferson Medical College Hospital *[1]	Philadelphia	J. R. Martin	A	240	2,912	3	2	1	7/1	12	.....
Shriners Hospital for Crippled Children [1-5]	Philadelphia	J. R. Moore	C	158	2,176	0	..	3	1/1	12-24	50.00
Temple University Hospital *[2-5]	Philadelphia	J. R. Moore	AFS	591	3,391	13	4	3	.....	12-36	50.00
†Allegheny General Hospital *[2]	Pittsburgh	D. Silver	AC	1,151	1,380	11	2	4	4/1	12-36	100.00
†St. Francis Hospital *[1]	Pittsburgh	C. C. Yount	A	434	316	2	1	1	.....	12	.....
Robert Packer Hospital *[1½]	Sayre, Pa.	I. Jaslow	AF	961	.....	13	7	2	.....	12	.....
Rhode Island Hospital *[½]	Providence, R. I.	H. E. Harris	F	647	4,864	24	3	2	4/1	12	100.00
Roper Hospital *[2]	Charleston, S. C.	W. Hazzard	AC	962	1,722	3	2	3	7/1	12-48	50.00
Shriners Hospital for Crippled Children [1-5]	Greenville, S. C.	J. W. White	C	228	1,344	1	..	2	7/1	12	100.00
†Baroness Erlanger Hospital *[1]	Chattanooga, Tenn.	R. C. Robertson	A	568	483	24	3	1	.....	12	90.00
†Knoxville General Hospital *[1-5]	Knoxville, Tenn.	R. Patterson	C	829	554	13	2	1	Varies	12	40.00
Willis C. Campbell Clinic Hospital [3]	Memphis, Tenn.	J. S. Speed	ACFS	1,573	9,996	9	1	10	1/1	12-36	50.00
Baylor University Hospital *[1-5]	Dallas, Tex.	F. L. Butte	A	847	7	4	1	1	10/1	12-24	50.00
Parkland Hospital *[1½-5]	Dallas, Tex.	J. H. McGuire	F	.....	.....	..	..	2	.....	12	50.00
Texas Scottish Rite Hospital for Crippled Children [1-5]	Dallas, Tex.	B. Carrell	C	617	.....	3	1	3	10/1	12	100.00
University of Virginia Hospital *[3-5]	Charlottesville	R. V. Funsten	ACFS	551	2,531	18	4	9	7/1	12	33.00
Cripplled Children's Hospital [1-5]	Richmond, Va.	W. T. Graham	C	199	.....	2	..	2	7/1	12	150.00
†Medical College of Virginia, Hosp. Div. *[2]	Richmond, Va.	H. P. Mauck	AFS	613	1,208	7	1	2	4/1	12	37.50
Children's Orthopedic Hospital [1-5]	Seattle	H. E. Coe	C	537	1,329	..	..	1	.....	12	.....
†King County Hospital *[½]	Seattle	I. O. McLemore	F	.....	.....	..	..	3	.....	12	125.00
Providence Hospital *[1]	Seattle	I. O. McLemore	A	832	.....	5	..	3	1/1	12	100.00
Swedish Hospital *[1½]	Seattle	J. LeCocq	AS	1,219	102	14	2	1	4/1, 7/1	12	50.00
†Shriners Hospital for Crippled Children [1-5]	Spokane	A. O. Adams	C	84	432	..	..	1	1/1	12-24	200.00
Charleston General Hospital *[1-5]	Charleston, W. Va.	G. Miyakawa	A	1,528	4,779	9	7	1	7/1	12	.....
Morris Memorial Hospital for Crippled Children [1-5]	Milton, W. Va.	P. H. Harmon	C	182	106	6	..	1	7/1	12-24	100.00
State of Wisconsin General Hospital *[3-5]	Madison	R. E. Burns	ACFS	1,242	4,637	23	14	6	7/1	12-36	25.00
Milwaukee County Hospital *[1-5]	Milwaukee	C. C. Schneider	A	1,843	2,386	45	5	3	4/1	12-36	68.22

Hospitals, 161; Assistant Residencies and Residencies, 427

14. PATHOLOGY

The following services approved by the Council are accredited by the American Board of Pathology as indicated in footnotes 1 and 3

United States Army.—Residencies available to medical officers, U. S. Army

Fitzsimons General Hospital *[3] ..... Denver

Army Institute of Pathology [1] ..... Washington, D. C.

United States Navy.—Residencies available to medical officers, U. S. Navy

U. S. Naval Hospital *[1] ..... Bethesda, Md.

U. S. Naval Hospital *[1] ..... Brooklyn

U. S. Naval Hospital *[3] ..... St. Albans, N. Y.

U. S. Naval Hospital *[3] ..... Philadelphia

Name of Hospital	Location	Chief of Service	Inpatients Treated [6]	Surgical Specimens	Number Examined Microscopically	Autopsy Percentage	Asst. Res. and Residencies [8]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Jefferson and Hillman Hospitals *[1]	Birmingham, Ala.	R. D. Baker	16,245	4,605	3,034	30	3	7/1	12-36	$ 50.00
University Hospital *[3]	Little Rock, Ark.	R. H. Rigdon	3,709	1,743	1,700	47	2	7/1	12-36	50.00
Cedars of Lebanon Hospital *[3]	Los Angeles	R. Straus	10,272	5,323	3,570	42	1	4/1	12	100.00
Children's Hospital [1]	Los Angeles	R. Knuttl	4,040	319	302	90	1	.....	12	.....
Hospital of the Good Samaritan *[1-5]	Los Angeles	R. W. Hammack	10,854	4,452	2,280	32	1	.....	12	.....
Los Angeles County Hospital *[3]	Los Angeles	E. M. Butt	48,835	5,843	582	34	3	.....	12	.....
St. Vincent's Hospital *	Los Angeles	R. Shoemaker	12,342	3,842	1,909	43	1	11/1	12-36	.....
White Memorial Hospital *[1]	Los Angeles	O. B. Pratt	9,612	5,469	4,102	58	1	4/1	12	31.00
Highland-Alameda County Hospital *[1]	Oakland, Calif.	A. G. Hulett	7,454	1,799	1,799	24	2	.....	12-36	105.00
Collis P. and Howard Huntington Memorial Hospital *[3]	Pasadena, Calif.	A. G. Foord	9,396	2,121	1,335	57	1	7/1	12-36	110.00
French Hospital *[1-5]	San Francisco	G. Watson	4,866	.....	.....	22	1	.....	12	.....
Mount Zion Hospital *[4]	San Francisco	G. R. Biskind	5,116	2,104	1,218	47	2	7/1	12	75.00
San Francisco Hospital *[1]	San Francisco	J. L. Carr	16,235	1,069	1,069	27	3	.....	12	150.00
Stanford University Hospitals *[2-5]	San Francisco	A. J. Cox	10,159	1,937	1,937	43	1	.....	12	.....
University of California Hospital *[4]	San Francisco	J. F. Rinehart	7,553	2,737	2,737	78	1	Varies	12	65.00
Santa Clara County Hospital *[1]	San Jose, Calif.	F. Proescher	5,249	375	211	23	1	.....	12	.....
Santa Barbara Cottage Hospital *[1]	Santa Barbara, Calif.	W. O. Russell	5,273	2,207	2,207	63	1	4/1	12-15	50.00
Children's Hospital [1]	Denver	H. D. Palmer	7,777	275	267	88	2	7/1	12-36	50.00
Colorado General Hospital *[3]	Denver	J. B. McNaught	5,526	1,067	874	78	5	7/1	12-48	80.00
Denver General Hospital *	Denver	W. W. Williams	9,502	1,123	741	28	1	4/1	12-24	50.00
St. Luke's Hospital *[3]	Denver	W. C. Black	.....	2,979	4,063	36	2	7/1	12-36	50.00
Colorado State Hospital [1]	Pueblo, Colo.	M. Gallavan	763	42	41	34	1	.....	12	150.00
Bridgeport Hospital *[3]	Bridgeport, Conn.	I. B. Akerson	10,727	2,519	2,519	27	1	.....	12	.....
Hartford Hospital *[3]	Hartford, Conn.	R. E. Kendall	21,949	5,589	5,089	39	3	.....	12	50.00
St. Francis Hospital *[1]	Hartford, Conn.	L. P. Hastings	15,574	3,775	3,775	22	1	5/1	12	50.00
New Britain General Hospital *[1]	New Britain, Conn.	P. D. Rosahn	6,915	3,163	2,122	21	1	4/1, 7/1	12-15	.....
Grace-New Haven Community Hospital New Haven Unit *[3-4]	New Haven, Conn.	M. Winternitz	10,614	2,384	2,172	54	5	4/1	12	.....

Numerical and other references will be found on page 1354.

14. PATHOLOGY—Continued

Name of Hospital	Location	Chief of Service	Inpatients Treated*	Surgical Specimens	Number Examined Microscopically	Autopsy Percentage	Asst. Res. and Residencies*	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Delaware Hospital *[2]	Wilmington, Del.	J. W. Howard	8,273	1,491	1,491	25	1	9/1	12-24	$100.00
Children's Hospital [1-4]	Washington, D. C.	E. C. Rice	6,610	.....	.....	66	1	.....	12	.....
Gallinger Municipal Hospital *[2-4]	Washington, D. C.	.....	17,268	1,719	1,584	50	1	.....	12	50.00
Garfield Memorial Hospital *[2-4]	Washington, D. C.	J. W. Lindsay	9,629	2,400	899	79	1	.....	12	75.00
Georgetown University Hospital *[2]	Washington, D. C.	V. J. Dardinski	6,831	1,520	845	49	5	4/1	12-24	75.00
George Washington University Hospital *[2]	Washington, D. C.	R. M. Choisser	2,807	574	574	69	3	.....	12	.....
Providence Hospital *[2]	Washington, D. C.	H. H. Leffler	10,413	2,380	2,293	50	1	.....	12-24	75.00
Sibley Memorial Hospital *[2]	Washington, D. C.	O. B. Hunter	10,691	3,765	3,324	58	1	.....	12	100.00
Grady Memorial Hospital *[2-4]	Atlanta, Ga.	S. C. Madden	13,662	1,928	1,928	23	3	.....	12	.....
University Hospital *[2-4]	Augusta, Ga.	E. R. Pund	10,438	4,104	2,624	14	2	7/1	12	35.00
Emory University Hospital *[2]	Emory University, Ga.	F. Parker	8,614	1,732	1,732	27	1	4/1	.....	50.00
Children's Memorial Hospital [1]	Chicago	J. P. Simonds	3,606	151	132	89	1	.....	12-24	79.16
Cook County Hospital *[2-4]	Chicago	H. Popper	59,874	5,387	4,685	20	23	.....	12-36	25.00
Mercy Hospital *[2]	Chicago	J. W. Henry	8,373	1,953	1,794	45	1	7/1	12-36	50.00
Michael Reese Hospital *[2-4]	Chicago	O. Saphir	15,004	3,714	3,714	50	6	.....	12	.....
Mount Sinai Hospital *[2-4]	Chicago	I. Davidsohn	7,307	3,904	2,591	41	2	.....	12	50.00
Passavant Memorial Hospital *[2-4]	Chicago	E. Hildebrand, Jr.	6,181	1,129	1,107	61	1	.....	12	.....
Presbyterian Hospital *[2]	Chicago	G. J. Pukstinat	11,744	3,507	3,507	57	2	4/1	12-36	50.00
Provident Hospital *[1]	Chicago	J. H. Lewis	3,802	1,094	1,037	34	1	.....	12	50.00
Research and Educational Hospitals *[2]	Chicago	G. A. Bennett	4,992	1,611	1,611	89	3	.....	12-36	55.00
St. Luke's Hospital *[2-4]	Chicago	E. F. Hirsch	13,987	5,335	5,000	61	5	7/1	12-36	25.00
University of Chicago Clinics *[2]	Chicago	P. R. Cannon	11,221	2,523	2,320	76	6	.....	12-36	25.00
Wesley Memorial Hospital *[1-4]	Chicago	E. H. Strauser	11,482	3,139	2,817	59	1	.....	12-36	25.00
Evanston Hospital *	Evanston, Ill.	J. McCarter	7,569	2,967	1,659	85	1	8/1	12-18	50.00
St. Francis Hospital *[2]	Evanston, Ill.	L. F. Bleyer	9,182	1,855	1,788	31	1	.....	12	.....
St. Joseph Hospital *[1]	Fort Wayne, Ind.	S. M. Rabson	6,950	1,953	1,437	23	2	1/1, 7/1	12-24	125.00
Methodist Hospital of Central Illinois *[1-2]	Peoria, Ill.	R. H. Fuller	5,806	3,082	2,180	33	1	11/1	12	100.00
St. Francis Hospital *[2-4]	Peoria, Ill.	E. J. Kraus	14,080	4,022	4,022	33	1	4/1	12-36	150.00
Indianapolis City Hospital *[2]	Indianapolis	W. B. Dublin	10,231	1,726	1,675	38	2	.....	12-36	.....
Indiana University Medical Center *[4]	Indianapolis	J. L. Arbogast	9,505	2,857	2,857	61	4	.....	12-36	33.33
Methodist Hospital *[1]	Indianapolis	H. M. Hunks	20,292	15,964	15,964	27	2	12-24	12-24	180.00
Ball Memorial Hospital *[1-3]	Muncie, Ind.	L. G. Montgomery	6,800	3,984	3,567	42	1	4/1	12	100.00
Memorial Hospital *[1-33]	South Bend, Ind.	A. S. Gordano	9,180	1,302	719	26	1	.....	12	.....
University Hospitals *[2-4]	Iowa City	E. D. Warner	16,818	.....	.....	41	3	7/1	12	40.00
University of Kansas Hospital *[2-4]	Kansas City, Kan.	.....	8,247	4,519[b]	1,329[b]	57	2	.....	12	50.00
St. Francis Hospital *[2]	Wichita, Kan.	C. A. Hellwig	14,711	5,166	5,166	47	1	7/1	12	100.00
Louisville General Hospital *	Louisville, Ky.	A. J. Miller	11,121	1,238	1,223	29	2	.....	12	.....
Charity Hospital of Louisiana *[1]	New Orleans	E. Moss	34,317	7,965	7,961	42	6	Varies	12-48	25.00
Touro Infirmary *[1]	New Orleans	S. H. Colvin	13,797	4,291	4,291	53	2	.....	12	.....
U. S. Marine Hospital *[1]	New Orleans	J. M. Lubitz	6,939	827	827	73	1	.....	12-24	65.00
Shreveport Charity Hospital *[1]	Shreveport, La.	W. R. Mathews	10,220	3,926	3,926	41	2	.....	36	60.00
Maine General Hospital *[2]	Portland, Me.	J. E. Porter	8,414	.....	.....	27	1	.....	12	.....
Baltimore City Hospitals *[2]	Baltimore	C. G. Warner	5,035	482	482	47	4	4/1	12	40.00
Johns Hopkins Hospital *[2]	Baltimore	A. Rich	19,964	3,092	3,092	58	5	4/1	12	.....
Sinai Hospital *[2-4]	Baltimore	T. Weinberg	7,264	2,221	2,221	55	3	7/1	12-36	35.00
University Hospital *[2]	Baltimore	H. R. Spencer	10,179	4,261	4,261	43	2	.....	12	.....
Beverly Hospital *[1]	Beverly, Mass.	N. W. Elton	4,118	802	802	72	1	1/1	12-24	50.00
Beth Israel Hospital *[2]	Boston	M. J. Schlesinger	6,072	2,704	2,692	50	1	7/1	12	79.16
Boston City Hospital *[2-4]	Boston	F. Parker, Jr.	32,258	4,092	4,092	27	5	.....	12	50.00
Boston Lying-In Hospital [1-4]	Boston	A. T. Hertig	3,625	331	331	46	2	1/1	12	50.00
Children's Hospital *[1]	Boston	S. Farber	6,789	631	631	74	1	Varies	12	.....
Massachusetts General Hospital *	Boston	.....	7,502	.....	.....	63	3	.....	12	.....
Massachusetts Memorial Hospitals *[2]	Boston	R. Osgood	7,973	1,747	1,747	71	1	.....	12	50.00
New England Deaconess Hospital [2]	Boston	S. Warren	7,338	.....	.....	51	3	7/1	12-24	50.00
Peter Bent Brigham Hospital *[2]	Boston	S. B. Wolbach	4,474	1,500	1,500	80	2	7/1	12	41.66
Salem Hospital *[2]	Salem, Mass.	D. A. Nickerson	5,646	1,887	1,887	38	1	.....	12	.....
Pondville Hospital [1]	Walpole, Mass.	O. Gates	641	955	955	82	2	.....	12	150.00
Worcester City Hospital *[2-4]	Worcester, Mass.	G. D. Kaneb	8,850	2,945	2,448	21	2	4/1	12	50.00
Worcester State Hospital [2-4]	Worcester, Mass.	W. Freeman	706	19	19	23	1	.....	12	.....
University Hospitals *[2-4]	Ann Arbor, Mich.	C. V. Weller	14,671	6,322	6,322	56	1	.....	12	101.00
City of Detroit Receiving Hospital *[2-4]	Detroit	O. A. Brines	17,220	1,929	1,929	40	2	.....	12	145.57
Grace Hospital *[2]	Detroit	C. I. Owen	14,987	4,958	2,175	30	3	4/1	12-36	125.00
Harper Hospital *[2-4]	Detroit	P. F. Morse	19,343	6,906[b]	6,906[b]	40	2	.....	12	85.00
Henry Ford Hospital *[2-4]	Detroit	F. W. Hartman	16,544	4,687[b]	4,687[b]	62	4	.....	12	.....
Herman Kiefer Hospital [1]	Detroit	W. L. Brosius	5,274	231	231	46	1	.....	12-36	205.83
Providence Hospital *[2]	Detroit	D. H. Kaump	13,113	3,900	3,900	61	1	.....	12	.....
Woman's Hospital *[1-4]	Detroit	D. C. Beaver	7,555	3,683	3,492	58	1	.....	12	.....
Wayne County General Hospital and Infirmary *[2-4]	Eloise, Mich.	S. E. Gould	5,125	1,858	1,858	29	3	.....	12	.....
Hurley Hospital *[1]	Flint, Mich.	R. J. Jermstad	15,082	1,817	1,781	23	1	7/1	12	.....
St. Luke's Hospital *	Duluth, Minn.	A. H. Wells	8,995	.....	.....	75	1	.....	12	.....
St. Mary's Hospital *[1]	Duluth, Minn.	W. V. Knoll	9,622	1,836	1,273	85	1	.....	12	.....
Mayo Foundation	Rochester, Minn.	H. E. Robertson	(See page 1354)				12	.....	12	.....
Ancker Hospital *[1]	St. Paul	J. F. Noble	6,387	615	512	73	1	7/1	12	91.50
St. Louis County Hospital *[2]	Clayton, Mo.	H. Allen	2,805	413	356	33	1	.....	12	.....
Kansas City General Hospital *[2]	Kansas City, Mo.	V. B. Buhler	8,077	690	640	49	2	.....	12-36	75.00
Research Hospital *[2]	Kansas City, Mo.	H. K. Allebach	6,578	2,431	2,294	56	1	.....	12	.....
St. Joseph Hospital *[1]	Kansas City, Mo.	L. Sherwood	9,561	4,598	3,150	56	1	.....	12	.....
St. Luke's Hospital *[1]	Kansas City, Mo.	F. C. Helwig	7,198	5,063	4,013	61	1	.....	12	.....
Barnes Hospital *[1-4]	St. Louis	R. A. Moore	14,473	3,192	3,192	67	2	7/1	12-36	25.00
Homer G. Phillips Hospital *[1]	St. Louis	S. H. Gray	10,189	1,321	936	24	1	10/1	12	80.00
Jewish Hospital *[1-4]	St. Louis	S. H. Gray	7,258	1,573[b]	1,525[b]	30	1	4/1	15	50.00
St. Louis City Hospital *[2-4]	St. Louis	S. H. Gray	13,406	2,128	2,128	50	3	4/1	12-36	80.00
St. Mary's Group of Hospitals *[1]	St. Louis	H. Pinkerton	12,740	5,874	4,487	45	3	7/1	36	35.00
Creighton Memorial St. Joseph's Hosp. *[2]	Omaha	C. B. Ransom	12,145	10,581[b]	7,935[b]	40	1	.....	12	.....
University of Nebraska Hospital *[2]	Omaha	J. P. Tollman	2,681	797	797	98	1	.....	12	.....
Mary Hitchcock Memorial Hospital *[2]	Hanover, N. H.	R. E. Miller	4,502	1,753	1,568	87	2	.....	12	.....
Elliot Hospital [1]	Manchester, N. H.	S. M. Brooks	2,997	1,186	857	71	1	7/1	12	100.00
Atlantic City Hospital *[1]	Atlantic City, N. J.	F. Konzelmann	6,125	.....	.....	21	1	.....	12	.....
Jersey City Hospital *[1-4]	Jersey City, N. J.	A. Gmassi	18,865	2,725	2,725	23	1	.....	12	.....
Newark Beth Israel Hospital *[2-4]	Newark, N. J.	L. Goldman	10,733	3,523	3,523	32	2	4/1	12	100.00
Paterson General Hospital *[1]	Paterson, N. J.	A. H. Davis	8,932	3,422	2,466	33	1	7/1	12-24	100.00
Albany Hospital *[2-4]	Albany, N. Y.	A. W. Wright	13,116	6,351	6,351	57	3	4/1, 7/1	12	25.00
Bender Hygienic Laboratory	Albany, N. Y.	J. J. Clemmer	.....	7,401	7,401	..	4	.....	36-48	100.00
Binghamton City Hospital *[2]	Binghamton, N. Y.	V. W. Bergstrom	8,970	1,698	1,648	24	1	7/1	12	100.00
Brooklyn Hospital *[2]	Brooklyn	J. A. DeVeer and J. E. Hall	7,770	2,252	2,238	31	1	4/1	12-15	85.00

Numerical and other references will be found on page 1354.

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14. PATHOLOGY—Continued

Name of Hospital	Location	Chief of Service	Inpatients Treated*	Surgical Specimens	Number Examined Microscopically	Autopsy Percentage	Asst. Res. and Residencies*	Beginning of Service (1960)	Length of Service (Months)	Beginning Stipend (Month)
Cumberland Hospital *[3,4]	Brooklyn	S. H. Polayes	5,720	852	852	42	2	1/1	12-18	$120.00
Israel Zion Hospital *[1,4]	Brooklyn	J. M. Ravid	10,707	2,162	2,131	43	2	4/1	12	125.00
Jewish Hospital *[3,4]	Brooklyn	D. M. Grayzel	13,038	4,242	946	35	3	7/1	12	25.00
Kings County Hospital *[1]	Brooklyn	C. Burn	49,463	8,677[b]	8,639[b]	16	5	7/1	12-24	50.00
Long Island College Hospital *[3,4]	Brooklyn	J. R. Oliver	8,424	3,512	3,512	39	1	.....	12	25.00
St. John's Hospital *[1]	Brooklyn	R. Gettinger	4,278	1,038[b]	1,038[b]	20	1	.....	12	.....
Buffalo General Hospital *[3]	Buffalo	K. Terplan	11,141	3,714	3,714	46	4	.....	12	.....
Edward J. Meyer Memorial Hospital *[3,4]	Buffalo	W. F. Jacobs, S. Sanes	9,065	2,324	1,688	39	3	.....	36	50.00
Millard Fillmore Hospital *	Buffalo	H. Welch	12,012	4,433	4,326	27	1	4/1	12-48	50.00
Meadowbrook Hospital *[1]	Hempstead, N. Y.	T. J. Curphey	4,504	2,069	2,069	47	2	.....	12	.....
Queens General Hospital *[3,4]	Jamaica, N. Y.	A. Angrist	10,657	7,319	7,319	44	2	.....	12	70.00
Beth Israel Hospital *[3,4]	New York City	A. Plaut	7,551	2,363	2,363	29	2	4/1	12-24	50.00
Bronx Hospital *[3]	New York City	J. Felsen	7,746	1,899	1,720	20	1	4/1	12-36	100.00
Flower and Fifth Avenue Hospitals *[3]	New York City	G. Higgins and F. Speer	9,574	4,000	4,000	32	2	7/1	12-48	50.00
Fordham Hospital *[4]	New York City	N. Block	9,302	2,009	2,080	19	1	.....	12	.....
Goldwater Memorial Hospital *[3,4]	New York City	M. Bevans	1,505	2,848	2,848	38	3	4/1	12	50.00
Harlem Hospital *[3]	New York City	M. Rothman	16,512	2,228	2,228	15	2	7/1	12	50.00
Lenox Hill Hospital *[3,4]	New York City	G. L. Rohdenburg	11,140	2,374	2,374	39	1	1/1	12	50.00
Lincoln Hospital *[1,4]	New York City	C. Brown	9,880	1,517	1,517	27	2	.....	12	.....
Memorial Hospital *	New York City	F. W. Stewart	5,314	12,745	12,745	36	5	.....	12-36	150.00
Metropolitan Hospital *[1,4]	New York City	A. Saccone	9,423	1,064	1,064	19	1	4/1	12	100.00
Montefiore Hosp. for Chronic Diseases *[3,4]	New York City	D. Marine	1,781	372	372	53	1	1/1	12	50.00
Morrisania City Hospital *[1]	New York City	W. Jeronson	10,193	939	885	16	1	.....	12	50.00
Mount Sinai Hospital *[3,4]	New York City	P. Klemperer	14,291	5,566	5,566	63	9	1/1, 7/1	12	30.00
New York City Hospital *[3]	New York City	J. R. Lisa	6,895	1,289	1,039	40	2	7/1	12	50.00
New York Hospital *[1]	New York City	J. G. Kidd	17,923	5,066	4,166	57	1	.....	12	.....
New York Post-Graduate Medical School and Hospital *[3,4]	New York City	M. N. Richter	8,616	5,267	5,095	48	3	4/1	12-15	90.00
Presbyterian Hospital *[3,4]	New York City	H. P. Smith	20,367	4,842	4,318	52	3	.....	12	41.67
Roosevelt Hospital *[1,4]	New York City	W. W. Brandes	7,435	2,202	2,202	32	2	.....	12	166.33
St. Luke's Hospital *[3,4]	New York City	L. C. Knox	8,166	3,830	1,910	33	2	7/1	12-36	50.00
St. Vincent's Hospital *	New York City	A. Rothman	12,434	1,537	1,537	33	2	4/1	12-24	50.00
Sydenham Hospital *[1]	New York City	A. Ginzler	4,918	1,686[b]	1,686[b]	21	1	.....	12	.....
Willard Parker Hospital [3,4]	New York City	V. B. Dolgopol	4,604	39	39	52	1	4/1	12	100.00
Rochester General Hospital *[1,4]	Rochester, N. Y.	M. G. Bohrod	9,761	3,925	2,800	75	1	7/1	12-36	85.00
St. Mary's Hospital *[3,4]	Rochester, N. Y.	S. M. Bouton	9,196	3,188	1,835	40	1	.....	12	.....
Strong Memorial and Rochester Municipal Hospitals *[4]	Rochester, N. Y.	G. H. Whipple	13,545	2,960	2,960	73	3	7/1	12-24	.....
Ellis Hospital *[3,4]	Schenectady, N. Y.	E. Kellert	14,657	4,320	4,314	22	2	.....	12	.....
Syracuse University Medical Center *[3]	Syracuse, N. Y.	H. Ferguson	4,630	1,007	1,007	42	1	.....	12	.....
Samaritan Hospital *[1,4]	Troy, N. Y.	G. H. Klinck, Jr.	4,660	1,919[b]	1,900	48	1	.....	12	.....
Grasslands Hospital *[3,4]	Valhalla, N. Y.	G. V. McClure	3,547	656	561	53	2	7/1	12-24	75.00
Charlotte Memorial Hospital *[3]	Charlotte, N. C.	P. Kimmelstiel	9,025	4,191	4,060	48	1	.....	12-36	75.00
Duke Hospital *[3,4]	Durham, N. C.	W. D. Forbus	12,885	18,380	23,838	60	14	.....	12	.....
Watts Hospital *[1]	Durham, N. C.	J. B. Miale	7,482	2,291[b]	2,291[b]	31	1	.....	12	.....
North Carolina Baptist Hospital *[1,4]	Winston-Salem, N. C.	R. P. Morehead	6,401	1,743[b]	1,743[b]	57	4	7/1	12	41.66
City Hospital *[1]	Akron, O.	L. Catron	12,501	3,435	3,435	26	2	.....	12	100.00
Christ Hospital *[1]	Cincinnati	I. H. Schroth	10,461	3,723	2,571	37	2	.....	12	.....
Cincinnati General Hospital *[4]	Cincinnati	R. W. Austin	18,838	1,197	1,183	41	8	.....	12	.....
Good Samaritan Hospital *[3]	Cincinnati	W. McK. Germain	15,934	4,948	.....	21	1	7/1	12-24	75.00
City Hospital *[3,4]	Cleveland	H. Lund	11,259	1,667	1,667	35	2	7/1	12	50.00
Mount Sinai Hospital *[3,4]	Cleveland	B. S. Kline	7,451	2,533	2,533	34	2	.....	12	77.00
St. Luke's Hospital *[1]	Cleveland	R. Dominguez	10,226	2,336	2,277	46	1	4/1	12	50.00
St. Vincent Charity Hospital *[1]	Cleveland	D. J. Rehbock	7,315	1,829	1,829	24	1	.....	12	.....
University Hospitals *[3]	Cleveland	H. T. Karsner	17,812	.....	.....	54	2	4/1	12	24.96
Starling-Loving University Hospital *[3,4]	Columbus, O.	H. L. Reinhart	8,246	1,936	1,936	40	3	4/1	12-18	50.00
White Cross Hospital *[3]	Columbus, O.	R. S. Fidler	9,619	8,109	5,597	38	1	4/1	12-24	100.00
Miami Valley Hospital *[1]	Dayton, O.	M. Oosting	10,784	6,147	6,147	37	1	.....	12	.....
Toledo Hospital *[1]	Toledo, O.	B. Steinberg	8,088	2,326	1,964	61	1	7/1	12	125.00
Youngstown Hospital *[1]	Youngstown, O.	H. K. Giffen	17,297	6,211	6,211	16	3	4/1	12	125.00
University Hospitals *	Oklahoma City	H. C. Hopps and B. Halpert	6,638	1,603	1,266	30	3	.....	12	.....
Emanuel Hospital *[1,4]	Portland, Ore.	H. H. Foskett	11,563	4,551	2,304	56	1	4/1	12	75.00
Good Samaritan Hospital *[3]	Portland, Ore.	C. H. Manlove	13,595	4,340	3,906	51	1	4/1	12	75.00
St. Vincent's Hospital *[1]	Portland, Ore.	F. R. Menne	15,765	4,638[b]	.....	38	2	.....	12	.....
University of Oregon Medical School Hospitals and Clinics *[1,4]	Portland, Ore.	W. C. Hunter	6,400	1,264	1,264	45	3	Varies	36	75.00
Abington Memorial Hospital *[3]	Abington, Pa.	J. Elman	7,354	2,242	2,229	37	1	4/1	12	50.00
Allentown Hospital *[3]	Allentown, Pa.	J. J. Wenner	8,867	5,842	2,712	31	1	7/1	12-24	50.00
Bryn Mawr Hospital *[1]	Bryn Mawr, Pa.	M. M. Strumia	6,353	2,616	2,616	41	2	4/1	12	125.00
George F. Geisinger Memorial Hospital *[1]	Danville, Pa.	H. F. Zunt	6,122	1,763	1,717	32	1	.....	12	75.00
Pittsburgh City Home and Hospitals *	Mayview, Pa.	.....	33	50[b]	50[b]	..	1	.....	12	.....
Germantown Dispensary and Hospital *	Philadelphia	F. B. Lynch	6,357	1,388	878	44	1	7/1	12-24	50.00
Graduate Hospital of the University of Pennsylvania *[3]	Philadelphia	E. A. Case	5,220	1,873	1,873	43	1	7/1	12-24	.....
Hahnemann Hospital *[3,4]	Philadelphia	S. W. Sappington	10,412	2,793[b]	2,793[b]	60	2	4/1	12-24	50.00
Hospital of the Protestant Episcopal Church *[1,4]	Philadelphia	W. P. Belk	7,860	1,121	1,121	47	1	.....	12	.....
Hosp. of the Univ. of Pennsylvania *[3,4]	Philadelphia	E. B. Krumbhaar	15,021	2,526	2,526	63	3	4/1	12-36	25.00
Jefferson Medical College Hospital *[3]	Philadelphia	C. J. Bucher	16,715	.....	.....	52	2	.....	12	.....
Jewish Hospital *[1,4]	Philadelphia	H. Ingleby	8,291	6,420	6,420	58	1	.....	12	.....
Lankenau Hospital *[3]	Philadelphia	C. D. Brown	5,219	4,923	4,923	53	1	7/1	12-36	100.00
Mount Sinai Hospital *[1,4]	Philadelphia	D. R. Meranze	6,619	2,354	2,354	58	1	4/1	12	100.00
Pennsylvania Hospital *[3]	Philadelphia	J. T. Bauer	9,092	1,903	1,903	40	2	.....	12-36	20.00
Philadelphia General Hospital *[3,4]	Philadelphia	J. H. Clark	22,778	2,073	2,073	53	3	4/1	12-36	70.00
Presbyterian Hospital *[3]	Philadelphia	J. W. Hooker	6,110	.....	.....	69	2	7/1	12	50.00
Temple University Hospital *[3,4]	Philadelphia	E. E. Aegerter	11,175	4,052	4,052	42	2	.....	36	50.00
Allegheny General Hospital *[3]	Pittsburgh	S. R. Haythorn	10,909	2,138	2,130	21	3	4/1	15	100.00
Children's Hospital [1,4]	Pittsburgh	M. L. Menten	4,302	181	181	28	1	.....	12-36	75.00
Elizabeth Steel Magee Hospital [1,4]	Pittsburgh	M. Cohen	7,342	2,089	1,880	40	2	.....	12	41.66
Mercy Hospital *[3,4]	Pittsburgh	H. H. Permar	13,628	3,425	2,940	23	2	4/1	12	.....
Montefiore Hospital *[1,4]	Pittsburgh	K. Yardumian	5,820	1,502	1,502	35	2	.....	12	.....
Presbyterian Hospital *[3]	Pittsburgh	G. R. Lacy	4,520	1,716	1,631	38	2	.....	12-36	33.00
St. Francis Hospital *[3]	Pittsburgh	A. J. Bruecken	11,292	5,286	1,500	19	3	.....	12	.....
Western Pennsylvania Hospital *[1,4]	Pittsburgh	A. Graham	10,337	2,043	2,043	26	1	.....	12	.....
Reading Hospital *	Reading, Pa.	E. D. Funk	7,234	2,359	1,667	64	1	.....	12	.....
Williamsport Hospital *[3]	Williamsport, Pa.	M. G. Colvin	6,658	1,938	1,094	24	1	7/1	12	75.00

Numerical and other references will be found on page 1354.

14. PATHOLOGY—Continued

Name of Hospital	Location	Chief of Service	Inpatients Treated [a]	Surgical Specimens	Number Examined Microscopically	Autopsy Percentage	Asst. Res. and Residencies [a]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Rhode Island Hospital [a,2]	Providence, R. I.	B. E. Clarke	10,795	4,137	4,137	58	2	....	12	.....
John Gaston Hospital [a,2]	Memphis, Tenn.	D. Sprunt	14,220	4,189	2,120	48	2	....	12	.....
St. Joseph Hospital [a,2]	Memphis, Tenn.	T. C. Moss	10,216	.....	.....	36	1	1/1	12	$100.00
Nashville General Hospital [a,1,4]	Nashville, Tenn.	W. A. DeMonbreun	5,718	898	877	19	2	.....	12	.....
Vanderbilt University Hospital [a,4]	Nashville, Tenn.	E. W. Goodpasture	7,159	.....	.....	53	3	.....	12	.....
Baylor University Hospital [a,2,4]	Dallas, Tex.	J. M. Hill	15,343	17,006	12,235	24	3	....	12-24	50.00
Parkland Hospital [a,4]	Dallas, Tex.	C. T. Ashworth	7,455	1,932	1,932	29	2	.....	12	.....
John Sealy Hospital [a,2]	Galveston, Tex.	P. Brindley	7,484	1,825	1,807	60	6	9/1	12	100.00
Jefferson Davis Hospital [a,4]	Houston, Tex.	W. W. Coulter	10,090	2,813	2,813	20	1	7/1	12-36	50.00
Salt Lake County General Hospital [a,2]	Salt Lake City	F. D. Gunn	3,223	748	748	58	1	7/1	12-36	50.00
Mary Fletcher Hospital [a,2,4]	Burlington, Vt.	B. Pearson	5,565	990	990	46	2	7/1	12-24	50.00
Norfolk General Hospital [a,2]	Norfolk, Va.	R. Crane	11,439	....	....	24	1	.....	12	....
Medical College of Virginia Hosp. Div. [a,2,4]	Richmond, Va.	F. L. Apperly	12,725	4,557	4,557	32	2	.....	12	.....
Providence Hospital [a,2]	Seattle	D. G. Mason	11,810	4,522	3,232	45	1	.....	36	....
Deaconess Hospital [a,2]	Spokane, Wash.	G. A. C. Snyder	7,795	3,965	2,681	30	1	.....	12	....
Tacoma General Hospital [a,4]	Tacoma, Wash.	C. P. Larson	7,696	.....	.....	20	1	4/1	12	150.00
Charleston General Hospital [a,2]	Charleston, W. Va.	W. G. J. Putschar	9,625	2,004	1,876	42	2	.....	12	.....
State of Wisconsin General Hospital [a,2,4]	Madison, Wis.	W. D. Stovall	11,398	2,957	2,924	61	2	7/1	36	25.00
Columbia Hospital [a,1,4]	Milwaukee	G. H. Hansmann	4,330	1,854	1,213	50	1	1/1	12-36	50.00
Milwaukee County Hospital [a,1,4]	Milwaukee	J. F. Kuzma	11,169	816	771	40	3	4/1	12-36	68.22
St. Joseph's Hospital [a]	Milwaukee	W. A. A. Anderson	11,883	1,967	1,942	29	1	.....	12	.....
Gorgas Hospital [a]	Ancon, C. Z.	B. H. Kean	21,615	1,949	1,949	76	1	7/1	12	208.33
Queen's Hospital [a]	Honolulu, Hawaii	S. Price	12,961	3,673	3,543	61	1	.....	12	.....

Hospitals, 232; Assistant Residencies and Residencies, 496

15. PEDIATRICS

The following services approved by the Council are accredited by the American Board of Pediatrics as indicated in footnotes 1 and 2

United States Navy.—Residencies available to medical officers, U. S. Navy
U. S. Naval Hospital [a,1] ..... Philadelphia

Name of Hospital	Location	Chief of Service	Inpatients Treated [a]	Outpatient Visits	Deaths	Autopsies	Asst. Res. and Residencies [a]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Children's Hospital [2,4]	Birmingham, Ala.	A. A. Walker	1,608	4,115	60	24	2	7/1	12-24	$100.00
Jefferson and Hillman Hospitals [a,1]	Birmingham, Ala.	A. A. Walker	1,223	669	49	5	1	7/1	12-36	50.00
Norwood Hospital [a,1,4]	Birmingham, Ala.	E. B. Smith	494	6,789	20	6	1	.....	24-36	100.00
General Hospital of Fresno County [a,1,4]	Fresno, Calif.	R. J. Van Wagenen	578	1,008	50	21	1	7/1	12	135.00
California Babies' and Children's Hospital [4]	Los Angeles	K. O. Lewis	394	10,095	..	1	1	1/1	12	200.00
Children's Hospital [2,4]	Los Angeles	V. Stork	1,926	28,581	132	112	12	7/1	12	80.00
Los Angeles County Hospital [a,2,4]	Los Angeles	E. F. Patton	3,632	2,812	209	76	3	4/1, 7/1	24	157.20
White Memorial Hospital [a,4]	Los Angeles	M. B. Brooks	399	10,106	..	..	2	4/1	12	31.00
Children's Hospital of the East Bay [2,4]	Oakland, Calif.	C. Sweet	3,473	17,562	24	13	4	.....	12	175.00
Children's Hospital [a,2,4]	San Francisco	C. F. Gelston	.....	.....	..	..	2	.....	12	.....
†Franklin Hospital [a,4]	San Francisco	J. Frost	1,982	.....	16	12	6	4/1	12	100.00
St. Mary's Hospital [a,1]	San Francisco	J. M. Rector	3,601[b]	3,204[b]	..	..	1	.....	12	100.00
San Francisco Hospital [a,4]	San Francisco	M. B. Olney	560	.....	26	5	1	.....	12	.....
Stanford University Hospitals [a,2,4]	San Francisco	H. K. Faber	509	15,721	16	7	4	7/1	12-24	50.00
University of California Hospital [a,2,4]	San Francisco	F. S. Smyth	459	894	29	25	3	.....	12	65.00
Childrens Hospital [2,4]	Denver	W. W. Barber	1,891[b]	.....	..	..	7	7/1	12	100.00
Denver General Hospital [a,1]	Denver	W. Jones	2,126	6,057	76	23	1	4/1	12-24	50.00
†Hartford Hospital [a,1]	Hartford, Conn.	.....	.....	.....	..	..	3	7/1	12	.....
Grace-New Haven Community Hospital										
New Haven Unit [a,2,4]	New Haven, Conn.	G. Powers	959	11,284	..	..	7	4/1	12	....
Hospital of St. Raphael [a,1]	New Haven, Conn.	W. J. McGuire	1,361	.....	19	8	3	4/1	12-36	75.00
†Delaware Hospital [a,1]	Wilmington, Del.	C. E. Wagner	1,484	150	59	17	1	7/1	12	125.00
Children's Hospital [2,4]	Washington, D. C.	J. S. Wall	6,640	49,659	331	218	12	1/1	12-24	40.00
Freedmen's Hospital [a,2,4]	Washington, D. C.	R. B. Scott	593	1,926	91	45	2	.....	12	.....
Gallinger Municipal Hospital [a,1,4]	Washington, D. C.	R. B. Scott	1,184	7,917	64	26	4	3/1	12-24	50.00
Grady Memorial Hospital [a,2]	Atlanta, Ga.	R. W. Dickson	986	20,037	103	31	6	.....	12	.....
Henrietta Egleston Hosp. for Children [2,4]	Atlanta, Ga.	M. H. Roberts	954[b]	.....	..	..	2	4/1	12	50.00
University Hospital [a,4]	Augusta, Ga.	P. A. Mulherin	1,369	1,379[b]	91	18	3	7/1	12-24	35.00
Children's Memorial Hospital [2,4]	Chicago	S. Gibson	3,715	46,213	96	84	20	1/1, 7/1	12	.....
Cook County Hospital [a,2,4]	Chicago	A. H. Parmalee	7,313	14,693	351	325	11	.....	12-36	25.00
Mercy Hospital-Loyola Univ. Clinics [a,1,4]	Chicago	H. A. Oberhelman	1,483	1,582	26	15	1	.....	12	.....
Michael Reese Hospital [a,2,4]	Chicago	J. Gerstley	2,143	6,879	186	126	4	.....	12-36	.....
†Mount Sinai Hospital [a,1]	Chicago	A. Levinson	577	622	14	12	1	.....	12	.....
Presbyterian Hospital [a,2,4]	Chicago	C. G. Grulee	1,116	3,931	24	20	2	4/1	12	50.00
Provident Hospital [a,2,4]	Chicago	E. W. Beasley	767	3,433	11	9	1	7/1	12	50.00
Research and Educational Hospitals [a,2,4]	Chicago	H. G. Poncher	271	5,455	23	18	2	.....	12-24	55.00
St. Luke's Hospital [a,2,4]	Chicago	A. D. Biggs	884	6,645	11	8	2	7/1	12-36	25.00
St. Vincent's Infant and Maternity Hosp. [1,4]	Chicago	L. W. Sauer	969	.....	7	7	2	.....	12	50.00
University of Chicago Clinics [a,2,4]	Chicago	.....	1,602	20,884	27	23	4	.....	12-36	25.00
Little Company of Mary Hospital [a,1]	Evergreen Park, Ill.	E. G. Lawler	1,847	.....	11	2	1	1/1	12	100.00
Indianapolis City Hospital [a,1]	Indianapolis	J. C. Carter	417	4,356	95	21	1	.....	12	80.00
Indiana University Medical Center [a,2,4]	Indianapolis	M. Winters	1,604	5,612	131	82	2	4/1	12-24	33.33
†Iowa Methodist Hospital (Raymond Blank Memorial Hospital for Children) [a,1]	Des Moines, Iowa	L. F. Hill	4,077	950	62	50	2	Varies	12	125.00
University Hospitals [a,2,4]	Iowa City	P. C. Jeans	804	2,600	39	19	5	7/1	12	25.00
University of Kansas Hospitals [a,2,4]	Kansas City, Kan.	F. Neff	664	2,903	33	30	1	5/1	12	50.00
Louisville General Hospital [a,2,4]	Louisville, Ky.	J. W. Bruce	1,691	7,140	82	15	5	4/1	12-48	45.00
Charity Hospital of Louisiana [a,2,4]	New Orleans	.....	3,090	19,368	149	75	12	.....	12-24	25.00
Touro Infirmary [a,2,4]	New Orleans	J. Graubarth	491	3,411	12	8	1	.....	12	.....
Baltimore City Hospitals [a,2,4]	Baltimore	H. E. Harrison	527	1,047	155	24	4	4/1	12	40.00
Johns Hopkins Hospital [a,2,4]	Baltimore	E. A. Park	1,370	30,527	129	81	7	4/1	12	.....
Union Memorial Hospital [a,4]	Baltimore	D. C. W. Smith	385	1,806	..	..	2	.....	12	20.00
University Hospital [a,1,4]	Baltimore	C. L. Joslin	574	8,384	123	43	3	4/1	15	50.00
Boston City Hospital [a,2,4]	Boston	M. J. English	3,858	6,919	154	25	1	.....	12	50.00
Boston Floating Hospital [2,4]	Boston	J. M. Baty	1,177	.....	42	26	4	4/1	12	.....
Children's Hospital [a,2,4]	Boston	.....	.....	.....	..	..	6	.....	12	.....

Numerical and other references will be found on page 1354.

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1946

15. PEDIATRICS—Continued

Name of Hospital	Location	Chief of Service	Inpatients Treated [a]	Outpatient Visits	Deaths	Autopsies	Asst., Res. and Residencies [c]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Massachusetts General Hospital [*2].....	Boston.....	.....	.....	.....	..	..	2	.....	12	.....
University Hospital [*2,4].....	Ann Arbor, Mich.....	J. Wilson	1,115	9,032	57	32	11	.....	12	$101.00
Children's Hospital [2,4].....	Detroit.....	W. W. Zoelzer.....	3,224	13,270	317	186	15	7/1	12	100.00
†Harper Hospital [*1].....	Detroit.....	D. J. Barnes.....	4,218	.....	11	4	1	.....	12	.....
Henry Ford Hospital [*2,4].....	Detroit.....	J. A. Johnston.....	1,815	18,718	27	14	4	4/1	18-24	175.00
St. Mary's Hospital [*1].....	Duluth, Minn.....	R. E. Nutting.....	3,022	.....	46	45	1	.....	12	.....
Minneapolis General Hospital [*2,4].....	Minneapolis.....	A. V. Stoesser.....	1,974	2,888	55	41	3	1/1, 7/1	12-36	91.50
†St. Barnabas Hospital [*1].....	Minneapolis.....	A. E. Karlstrom.....	759	.....	12	10	1	.....	12	.....
University Hospitals [*2,4].....	Minneapolis.....	I. McQuarrie	1,401	4,050	78	42	3	7/1	36	91.50
Mayo Foundation [2].....	Rochester, Minn.....	H. F. Helmholz.....	(See page 1354)				12	.....	12	.....
Children's Mercy Hospital [4].....	Kansas City, Mo.....	C. B. Summers.....	1,711	9,666	82	33	4	7/1	12-36	50.00
Kansas City General Hospital [*1].....	Kansas City, Mo.....	D. Walthal	1,166	3,864	22	14	2	.....	12-36	75.00
Homer G. Phillips Hospital [*2,4].....	St. Louis.....	D. Jones	1,586	2,654	44	..	2	10/1	12	80.00
†Jewish Hospital [*1,4].....	St. Louis.....	A. A. Margulis.....	1,572	622	3	2	1	.....	12	.....
St. Louis Children's Hospital [2,4].....	St. Louis.....	A. F. Hartmann.....	2,931	.....	143	85	15	4/1, 10/1	12	25.00
St. Louis City Hospital [*2,4].....	St. Louis.....	A. F. Hartmann.....	1,102	2,615	81	38	3	.....	12	.....
St. Mary's Group of Hospitals [*2].....	St. Louis.....	J. Zahorsky	1,555	11,163	61	30	3	.....	36	35.00
†Creighton Memorial St. Joseph Hosp. [*1,4]	Omaha.....	F. S. Clarke.....	3,322	235	27	29	3	Varies	12	100.00
Jersey City Hospital [*4].....	Jersey City, N. J.....	C. P. DeFuccio.....	2,736	4,955	35	15	3	.....	12	.....
†Babies Hospital, Coit Memorial [1].....	Newark, N. J.....	M. G. Gregory.....	2,267	2,855	40	13	1	Varies	12	200.00
†St. Michael's Hospital [*1].....	Newark, N. J.....	H. A. Murray.....	1,630	.....	24	15	1	7/1	12	75.00
Albany Hospital [*2,4].....	Albany, N. Y.....	O. A. Faust.....	794	1,648	33	23	3	4/1, 7/1	12	25.00
†Brooklyn Hospital [*3].....	Brooklyn.....	H. A. Maumer.....	664	4,919	33	13	1	.....	12	.....
Cumberland Hospital [*4].....	Brooklyn.....	T. B. Givan.....	1,361	2,859	32	20	2	4/1	12	70.00
Jewish Hospital [*2,4].....	Brooklyn.....	B. Kramer	776	9,463	57	36	4	1/1, 7/1	12	25.00
Kings County Hospital [*2,4].....	Brooklyn.....	G. Brockway and Kradulik	2,812	3,524	130	65	4	7/1	12-24	25.00
Long Island College Hospital [*2,4].....	Brooklyn.....	C. A. Weymuller.....	563	7,103	32	17	4	7/1	12-24	25.00
Norwegian Lutheran Deaconesses' Home and Hospital [*4].....	Brooklyn.....	J. A. Monfort and T. B. Givan.....	974[b]	600[b]	..	..	1	.....	12	.....
Children's Hospital [2,4].....	Buffalo.....	D. P. Arnold.....	1,382	.....	93	61	7	7/1	12	25.00
Edward J. Meyer Memorial Hospital [*1].....	Buffalo.....	F. J. Gustina.....	1,159	3,283	40	23	3	.....	12-48	59.00
Queens General Hospital [*2,4].....	Jamaica, N. Y.....	H. A. Reisman.....	1,004	2,324	35	24	3	.....	12	70.00
Bellevue Hosp., Div. III—N. Y. Univ. [*2,4]	New York City.....	E. Holt	2,081[b]	17,494[b]	69[b]	60[b]	16	Varies	12	25.00
†Beth Israel Hospital [*1,4].....	New York City.....	J. M. Lewis and P. Cohen	411	2,248	5	3	1	4/1	12-24	50.00
Flower and Fifth Avenue Hospitals [*2,4]	New York City.....	R. A. Benson.....	443	1,624[b]	25	..	3	7/1	12	50.00
Harlem Hospital [*2,4].....	New York City.....	M. Gleich	.....	.....	..	..	2	1/1, 7/1	12	50.00
Lenox Hill Hospital [*1,4].....	New York City.....	H. Chaplin and J. Leopold	489	5,808	10	10	1	1/1	12	50.00
Lincoln Hospital [*2,4].....	New York City.....	A. T. Martin.....	985	3,782[b]	39	..	2	.....	12	.....
Metropolitan Hospital [*2,4].....	New York City.....	A. Benson.....	1,017	4,186	36	19	2	4/1	12	50.00
Morrisania City Hospital [*4].....	New York City.....	L. Barenberg	995	1,319	38	14	2	4/1	15	50.00
Mount Sinai Hospital [*2,4].....	New York City.....	.....	.....	.....	..	..	5	1/1, 7/1	18	50.00
New York City Hospital [*2,4].....	New York City.....	C. S. Boyd.....	570	3,376	31	29	1	7/1	12	100.00
New York Hospital [*2,4].....	New York City.....	S. Z. Levine.....	1,095	32,051	82	62	13	4/1	24-60	25.00
New York Post-Graduate Medical School and Hospital [*2,4].....	New York City.....	A. G. DeSanctis.....	665	11,310	34	21	4	1/1, 4/1, 7/1	12-24	90.00
Presbyterian Hospital [*2,4].....	New York City.....	R. McIntosh	3,589	31,219	115	..	13	.....	12	.....
†Roosevelt Hospital [*1].....	New York City.....	A. T. Martin.....	1,040	1,918	13	6	1	.....	12	.....
St. Luke's Hospital [*2,4].....	New York City.....	H. F. Jackson.....	564	3,949	14	4	2	7/1	12-24	50.00
St. Vincent's Hospital [*1,4].....	New York City.....	S. Brady	1,035	4,350	32	14	2	4/1	12-24	50.00
Genesee Hospital [*1,4].....	Rochester, N. Y.....	J. Aikman	974	708[b]	9	8	1	.....	12	.....
†Rochester General Hospital [*1,4].....	Rochester, N. Y.....	P. W. Beaven.....	484	1,108	18	17	1	4/1	12-24	85.00
Strong Memorial and Rochester Municipal Hospitals [*2,4].....	Rochester, N. Y.....	S. W. Clausen.....	1,480	8,204	63	49	7	7/1	12-48	41.66
Sea View Hospital [2,4].....	Staten Island, N. Y....	B. Ratner	317	.....	8	..	5	1/1, 7/1	12	120.00
Syracuse Memorial Hospital [*4].....	Syracuse, N. Y.....	B. C. Doust.....	1,394	.....	33	20	2	7/1	12	.....
Grasslands Hospital [*4].....	Valhalla, N. Y.....	F. D. Barnes.....	450	786	12	8	2	1/1, 4/1	12	75.00
Charlotte Memorial Hospital [*1,4].....	Charlotte, N. C.....	J. S. Hunt.....	783	2,660	34	14	1	.....	12-36	.....
†Presbyterian Hospital [1].....	Charlotte, N. C.....	J. A. Jones.....	1,766	.....	20	4	1	.....	12	.....
Duke Hospital [*2,4].....	Durham, N. C.....	W. C. Davison.....	1,891	8,197	46	17	4	4/1	12	83.33
Watts Hospital [*].....	Durham, N. C.....	A. H. London.....	1,722	164	28	12	1	4/1	15	100.00
†Sternberger Hosp. for Women and Children [1]	Greensboro, N. C.....	S. F. Ravenel.....	.....	.....	24	2	1	.....	12	.....
†Rex Hospital [*1,4].....	Raleigh, N. C.....	A. P. Root.....	2,700	328	48	15	2	4/1	12	150.00
Babies Hospital [1].....	Wilmington, N. C.....	J. B. Sidbury.....	1,362	4,015	..	..	2	1/1	12	150.00
North Carolina Baptist Hospital [*1,4].....	Winston-Salem, N. C..	L. J. Butler.....	427	1,420	28	22	3	7/1	12	41.66
Trinity Hospital [*1,5].....	Minot, N. D.....	.....	.....	.....	..	..	1	.....	12	.....
Children's Hospital	Akron, O.....	.....	2,242	9,000	93	38	1	4/1	12	125.00
Children's Hospital	Cincinnati.....	A. A. Weech.....	6,246	18,704	145	92	16	7/1	12-18	35.00
Cincinnati General Hospital [*2,4].....	Cincinnati.....	A. A. Weech.....	1,350	6,067	120	64	19	4/1	12-24	.....
University Hospitals [*2,4].....	Cleveland.....	H. J. Gerstenberger.....	.....	.....	..	..	3	4/1	12	24.96
Children's Hospital [2,4].....	Columbus, O.....	E. H. Baxter.....	1,805	21,814[b]	..	..	7	.....	12	.....
University Hospitals [*2,4].....	Oklahoma City.....	C. H. Hall.....	918	3,530	92	27	2	1/1	12-18	75.00
University of Oregon Medical School Hospitals and Clinics [*2,4].....	Portland, Ore.....	J. B. Bilderback.....	1,686	5,253	95	63	3	.....	36	75.00
Babies' Hospital [1,4].....	Philadelphia.....	J. F. Sinclair.....	257	23,444	11	7	2	4/1	12	83.33
Children's Hospital [2,4].....	Philadelphia.....	J. Stokes Jr.....	2,349	28,911	107	74	12	7/1	12-36	.....
Children's Hospital of the Mary J. Drexel Home [4].....	Philadelphia.....	E. P. Bacon, E. Harshaw and J. M. Lyon.....	1,003[b]	12,042[b]	..	..	1	1/1	12	100.00
†Germantown Dispensary and Hospital [*1]...	Philadelphia.....	P. S. Barba.....	2,636	866	14	7	1	7/1	12-24	50.00
†Graduate Hospital of the University of Pennsylvania [*1].....	Philadelphia.....	J. Scott	114	1,992	5	4	1	7/1	12	.....
Hahnemann Hospital [*1,4].....	Philadelphia.....	C. C. Fischer.....	930	4,498	31	10	1	9/1	12-24	50.00
Hosp. of the Univ. of Pennsylvania [*2,4].	Philadelphia.....	J. Stokes Jr.....	467	3,778	39	30	1	4/1	12	41.50
Jefferson Medical College Hospital [*1].....	Philadelphia.....	E. L. Bauer.....	525	7,007	..	..	1	.....	12	.....
Jewish Hospital [*1].....	Philadelphia.....	.....	614	112[b]	23	17	1	11/1	12	75.00
Philadelphia General Hospital [*2,4].....	Philadelphia.....	.....	1,090	.....	70	..	1	4/1	12-36	70.00
St. Christopher's Hospital for Children [4].	Philadelphia.....	.....	2,017[b]	42,496[b]	..	..	7	.....	12	.....
†St. Luke's and Children's Medical Center [*1]	Philadelphia.....	J. L. Redman.....	1,257	2,700	36	13	1	4/1	12	100.00
Temple University Hospital [*2,4].....	Philadelphia.....	W. E. Nelson.....	444	4,604	19	14	4	.....	36	50.00
Children's Hospital [2,4].....	Pittsburgh.....	.....	.....	.....	..	..	6	.....	12-36	75.00
†Western Pennsylvania Hospital [*1].....	Pittsburgh.....	H. C. Flood.....	1,316	525	..	..	1	.....	12	.....
†Charles V. Chapin Hospital [1].....	Providence, R. I.....	H. G. Calder.....	863	1,251	28	13	1	.....	12	.....
†Rhode Island Hospital [*1].....	Providence, R. I.....	W. P. Buffum.....	803	1,739	43	25	1	.....	12	50.00
Roper Hospital [*4].....	Charleston, S. C.....	M. W. Beach.....	948	4,402	93	42	4	7/1	12-48	50.00
T. C. Thompson Children's Hospital.....	Chattanooga, Tenn...	J. W. Hocker.....	551	7,505	..	..	3	.....	12	.....

Numerical and other references will be found on page 1354.

15. PEDIATRICS—Continued

Name of Hospital	Location	Chief of Service	Inpatients Treated [a]	Outpatient Visits	Deaths	Autopsies	Asst. Res. and Residencies [a]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
†Knoxville General Hospital *[1]	Knoxville, Tenn.	W. R. Cross	1,465	224	40	5	1	.....	12	.....
John Gaston Hospital *[2]	Memphis, Tenn.	F. T. Mitchell	1,694	5,238	120	67	2	.....	12	.....
†St. Joseph Hospital *[1]	Memphis, Tenn.	.....	.....	.....	..	..	1	.....	12	.....
George W. Hubbard Hospital of Meharry Medical College *[2,4]	Nashville, Tenn.	E. P. Crump	482	3,513	27	4	1	7/1	12	$ 75.00
Vanderbilt University Hospital *[2,4]	Nashville, Tenn.	A. Christie	731[b]	12,016[b]	..	..	4	.....	12	.....
Children's Medical Center [2,4]	Dallas, Tex.	B. Knickerbocker	2,235[b]	8,867	83	50	9	4/1, 7/1	12-27	50.00
†Parkland Hospital *[1]	Dallas, Tex.	W. Bradford	1,668	.....	94	22	2	.....	12	50.00
John Sealy Hospital *[2,4]	Galveston, Tex.	A. Hansen	642	8,159	48	36	6	.....	12	.....
†Hermann Hospital *[1,4]	Houston, Tex.	J. H. Park	441	2,415	24	13	3	4/1	12	50.00
Jefferson Davis Hospital *[1,4]	Houston, Tex.	J. L. Collier	1,088	4,606	123	14	1	7/1	12	50.00
Salt Lake County General Hospital *[1,4]	Salt Lake City	J. A. Anderson	470[b]	4,544	44	28	3	7/1	12-36	50.00
University of Virginia Hospital *[2,4]	Charlottesville, Va.	W. W. Waddell Jr.	662	5,369	69	30	5	7/1	12	25.00
Medical College of Virginia, Hosp. Div.*[4]	Richmond, Va.	L. H. Sutton	1,172	5,008	49	27	4	4/1	12	37.50
Children's Orthopedic Hospital [1,4]	Seattle, Wash.	.....	376	1,219	..	..	1	4/1	12	.....
State of Wisconsin General Hospital *[2,4]	Madison	J. E. Gonce Jr.	476	3,578	30	23	2	7/1	36	25.00
Milwaukee Children's Hospital [2,4]	Milwaukee	F. R. Janney	4,400	15,574	86	46	7	4/1	12	.....
Milwaukee County Hospital *[2,4]	Milwaukee	G. H. Fellman	2,766	484	11	1	2	4/1	12-36	68.22

Hospitals, 159; Assistant Residencies and Residencies, 584

16. PHYSICAL MEDICINE

United States Army.—Residencies available to medical officers, U. S. Army

Walter Reed General Hospital *	Washington, D. C.						

Name of Hospital	Location	Chief of Service	Patients Treated	Number of Treatments	Asst. Res. and Residencies [a]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (M. mth)
†Los Angeles County Hospital *	Los Angeles	O. L. Huddleston	888[m]	7,637[m]	1	.....	12	.....
Stanford University Hospital *[4]	San Francisco	W. H. Northway	.....	.....	2	.....	12	.....
†University of California Hospital *	San Francisco	F. Baker	12,000	.....	1	Varies	12	$40.00
Michael Reese Hospital *[4]	Chicago	C. O. Molander	.....	2,647[n]	2	.....	12	.....
Passavant Memorial Hospital *	Chicago	J. S. Coulter	.....	.....	2[p]	.....	12	.....
University of Kansas Hospitals *	Kansas City, Kan.	G. M. Martin	1,229	16,083	3	.....	18	50.00
†Massachusetts General Hospital *	Boston	A. L. Watkins	1,572	8,927[n]	2	Varies	12-24	.....
†University Hospitals *	Minneapolis	M. E. Knapp	.....	15,276	1	.....	12	.....
Mayo Foundation	Rochester, Minn.	F. H. Krusen	(See page 1354)		6	.....	12	.....
†Goldwater Memorial Hospital *	New York City	H. J. Behrend	873	61,786	1	7/1	12	.....
†Hospital for Joint Diseases *	New York City	J. Weiss	.....	160,197	1	4/1	16	40.00
†Montefiore Hospital for Chronic Diseases *	New York City	K. Harpuder	.....	.....	1	.....	16	.....
†Mount Sinai Hospital *	New York City	W. Bierman	.....	31,000	1	.....	12	50.00
†Presbyterian Hospital *	New York City	W. B. Snow	.....	109,575	1	7/1	16	.....
St. Luke's Hospital *	New York City	R. Muller	22,585	76,212	1	.....	12	.....
†Cleveland Clinic Foundation Hospital	Cleveland	W. J. Zeiter	.....	38,000	1	7/1	12	100.00
†Hospital of the Univ. of Pennsylvania *	Philadelphia	G. M. Piersol	2,100	33,345	1	.....	12	.....
†Medical College of Virginia, Hosp. Div.*	Richmond, Va.		225[m]	2,208[m]	1	.....	12	.....
†State of Wisconsin General Hospital *	Madison, Wis.	E. Grimm	1,680	12,000	2	.....	12	.....

Hospitals, 19; Assistant Residencies and Residencies, 31

17. PLASTIC SURGERY

Name of Hospital	Location	Chief of Service	Inpatients Treated [a]	Outpatient Visits	Deaths	Autopsies	Asst. Res. and Residencies [a]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
†University of Kansas Hospitals *	Kansas City, Kan.	E. C. Padgett	289	.....	2	1	8	7/1	24-48	$ 50.00
†Charity Hospital of Louisiana *	New Orleans, La.	N. Owens	(Included in Surgery)				3	Varies	12-36	75.00
†Blodgett Memorial Hospital *	Grand Rapids, Mich.	F. Smith	765	236	4	1	1	7/1	36-60	150.00
Mayo Foundation	Rochester, Minn.	G. B. New	(See page 1354)				4	.....	12	.....
†Hospital of St. Barnabas and for Women and Children *	Newark, N. J.	L. A. Peer	410	987	1	1	2	.....	24	150.00
Kings County Hospital *[4]	Brooklyn	W. A. Coakley	.....	.....	..	..	2[p]	7/1	12-24	25.00
Presbyterian Hospital *[4]	New York City	.....	.....	.....	..	..	2	.....	12	.....
Strong Memorial-Rochester Municipal Hospitals *	Rochester, N. Y.	F. Young	177	109	..	..	2	7/1	12-36	.....
†University Hospitals *	Oklahoma City	J. F. Burton	181	564	9	1	11	.....	12-27	35.00
Graduate Hospital of the University of Pennsylvania *	Philadelphia	R. H. Ivy	189	7	..	..	1	7/1	12-24	.....
†Jefferson Medical College Hospital *	Philadelphia	W. B. Davis	.....	.....	..	..	1	.....	12-36	50.00

Hospitals, 11; Assistant Residencies and Residencies, 37

18. PSYCHIATRY

The following services are approved by the Council and the American Board of Psychiatry and Neurology (See footnotes 1, 2 and 3)

United States Navy.—Residencies available to medical officers, U. S. Navy

†U. S. Naval Hospital *[1]	Great Lakes, Ill.	†U. S. Naval Hospital *[1]	Philadelphia
†U. S. Naval Hospital *[1]	Bethesda, Md.	†U. S. Naval Hospital *[1]	Portsmouth, Va.

Compton Sanitarium [1,4]	Compton, Calif.	G. E. Meyers	774	.....	9	..	1	.....	12	$150.00
†Napa State Hospital [1]	Imola, Calif.	R. S. Rood	.....	.....	371	60	2	7/1	12	.....
Livermore Sanitarium [1]	Livermore, Calif.	C. W. Mack	608	.....	9	..	5	.....	12	.....
Los Angeles County Hospital *[2,4]	Los Angeles	G. N. Thompson	5,075	780	92	20	3	4/1, 7/1	12-36	137.30
Langley-Porter Clinic [2,4]	San Francisco	K. M. Bowman	689	13,787	..	..	14	Varies	12-36	180.00
Mount Zion Hospital *[2]	San Francisco	J. Kasanin	.....	1,868[b]	..	..	2	.....	12	75.00
Stanford University Hospitals *[2,4,7]	San Francisco	G. S. Johnson	473[b]	4,150[b]	..	..	3	.....	12	.....
University of California Hospital *[2,4]	San Francisco	K. M. Bowman	20	153	..	..	1	Varies	12	65.00

Numerical and other references will be found on page 1354.

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18. PSYCHIATRY—Continued

Name of Hospital	Location	Chief of Service	Inpatients Treated *	Outpatient Visits	Deaths	Autopsies	Asst. Res. and Residencies *	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Mendocino State Hospital [3]	Talmage, Calif.	M. J. Rowe	3,469[b]	.....	..	..	2	.....	12	.....
Colorado Psychopathic Hospital [3,4]	Denver	C. A. Rymer	868	4,101	24	19	7	9/1	12-36	$160.00
Colorado State Hospital [2,4]	Pueblo, Colo.	F. H. Zimmerman	5,551	.....	372	118	7	.....	12	.....
Institute of Living (Neuro-Psychiatric Institute of the Hartford Retreat) [3,4]	Hartford, Conn.	C. C. Burlingame	1,107[b]	.....	..	..	7	.....	12	225.00
Connecticut State Hospital [2,4]	Middletown, Conn.	H. S. Whiting	3,623[b]	.....	..	..	3	.....	12	.....
Grace-New Haven Community Hospital										
New Haven Unit [2,4]	New Haven, Conn.	E. Kahn	301	1,720	..	..	9	4/1	12	.....
†Fairfield State Hospital [1]	Newtown, Conn.	S. Friedman	.....	.....	229	60	4	Varies	12-24	185.00
Norwich State Hospital [2,4]	Norwich, Conn.	R. H. Guthrie	3,151[b]	67[b]	..	..	6	.....	12	170.00
Delaware State Hospital [2,4]	Farnhurst, Del.	A. A. Tarnopolsky	1,408	1,154	82	22	4	7/1	12	75.00
Gallinger Municipal Hospital [3,4]	Washington, D. C.	.....	3,358	.....	96	21	3	3/1	12	50.00
St. Elizabeths Hospital [2,4]	Washington, D. C.	W. Overholser	10,225	40,075	460	256	11	4/1	12	183.33
Chicago State Hospital [2,4]	Chicago	L. D. Shapiro	592	.....	6	..	5	1/1	12	130.00
Cook County Hospital [2,4]	Chicago	C. A. Neymann	6,332[b]	.....	..	..	4	.....	12-36	25.00
Illinois Neuropsychiatric Institute [2,4,7]	Chicago	F. J. Gerty	576	.....	..	..	8	Varies	12	55.00
Michael Reese Hospital [2,4,7]	Chicago	R. Grinker	258	2,836	..	..	2	.....	24-36	.....
St. Luke's Hospital [1,4]	Chicago	A. P. Solomon	276	.....	2	1	2	7/1	12-36	25.00
University of Chicago Clinics [2,4]	Chicago	D. Slight	176	2,715	1	..	2	.....	12-36	25.00
Veterans Rehabilitation Center [1]	Chicago	A. P. Solomon	.....	.....	..	..	1	7/1	12	110.00
Wesley Memorial Hospital [2]	Chicago	T. T. Stone	302	7	6	1	.....	.....	12-36	25.00
Elgin State Hospital [2,4]	Elgin, Ill.	E. Liebert	6,475	1,265	405	69	6	Varies	12	150.00
†Kankakee State Hospital [1]	Kankakee, Ill.	A. Simon	.....	.....	287	50	5	Varies	12-36	150.00
Manteno State Hospital [2,4]	Manteno, Ill.	M. Wallenberg	8,035	.....	584	142	6	.....	12	150.00
Peoria State Hospital [2,4]	Peoria, Ill.	H. B. Knowles	3,313[b]	.....	..	2	5	.....	12	50.00
Central State Hospital [4]	Indianapolis	M. A. Bahr	2,903	.....	224	8	4	Varies	12	137.00
Indianapolis City Hospital [2]	Indianapolis	L. D. Carter	821	833	46	17	1	.....	24	80.00
Logansport State Hospital [2,4]	Logansport, Ind.	C. L. Williams	2,993	.....	204	..	6	4/1	24-36	240.00
Iowa State Psychopathic Hospital [2,4]	Iowa City	W. R. Miller	321[b]	.....	..	..	8	4/1, 7/1	12	40.00
Menninger Sanitarium [2,4]	Topeka, Kan.	R. L. Worthington	168	527	..	..	8	7/1	12-36	150.00
U. S. Public Health Service Hospital [2]	Lexington, Ky.	.....	3,286[b]	.....	..	..	1	.....	12	.....
†Louisville General Hospital [2]	Louisville, Ky.	W. E. Gardner	593	1,601	17	5	3	7/1	12-24	185.00
†Charity Hospital of Louisiana [2]	New Orleans	.....	.....	4,835	..	..	3	Varies	12-36	25.00
†DePaul Sanitarium [1]	New Orleans	W. J. Otis	.....	.....	14	7	1	7/1	12-36	.....
Johns Hopkins Hospital [2,4]	Baltimore	J. C. Whitehorn	382	4,449	2	1	18	4/1	12	.....
Spring Grove State Hospital [2,4]	Catonsville, Md.	S. W. Weltmer	3,004	1,655	197	96	12	.....	12	.....
Springfield State Hospital [2,4]	Sykesville, Md.	K. B. Jones	3,560[b]	.....	..	..	6	.....	12	.....
Sheppard and Enoch Pratt Hospital [2,4]	Towson, Md.	R. McG. Chapman	340	146	5	3	9	3/1, 7/1	12-36	100.00
Boston Psychopathic Hospital [2,4]	Boston	H. C. Solomon	1,306	6,443	11	3	8	9/1	12	95.00
Boston State Hospital [2,4]	Boston	T. F. Lindberg	3,973[b]	.....	..	..	6	.....	12	.....
Massachusetts General Hospital [2]	Boston	.....	.....	.....	..	..	3	.....	12	.....
Foxboro State Hospital [2]	Foxboro, Mass.	R. B. Dexter	1,529	378	118	12	2	1/1, 4/1	12	100.00
Gardner State Hospital [2,4]	Gardner, Mass.	C. E. Thompson	1,738	482	77	18	9	.....	12	170.00
Danvers State Hospital [2,4]	Hathorne, Mass.	L. Maletz	2,998	1,200	264	37	2	4/1	12	.....
Medfield State Hospital [2]	Medfield, Mass.	E. K. Holt	2,679[b]	.....	..	..	2	.....	12	.....
Northhampton State Hospital [2,4]	Northampton, Mass.	L. W. Darrah	2,756[b]	.....	..	..	10	.....	12	.....
Grafton State Hospital [2,4]	North Grafton, Mass.	H. L. Paine	2,012	1,543	96	18	2	Varies	12	100.00
Monson State Hospital [1]	Palmer, Mass.	M. B. Hodskins	1,512[b]	.....	..	..	1[d]	Varies	12	.....
Taunton State Hospital [2,4]	Taunton, Mass.	R. M. Chambers	2,477	1,997	273	61	7	7/1	12-24	185.00
Metropolitan State Hospital [1]	Waltham, Mass.	M. Askoff	.....	.....	110	48	1	7/1	12-24	100.00
McLean Hospital [2,4]	Waverley, Mass.	K. J. Tillotson	323	.....	13	2	5	.....	12	.....
Westboro State Hospital [2,4]	Westboro, Mass.	W. E. Lang	2,147	776	152	21	3	.....	12-24	125.00
Worcester State Hospital [2,4]	Worcester, Mass.	W. Malamud	3,450[b]	.....	269	51	10	.....	12	.....
University Hospital [2,3,4]	Ann Arbor, Mich.	R. W. Waggoner	327	3,011	3	3	6	.....	12	101.00
City of Detroit Receiving Hospital [2,4]	Detroit	J. M. Stanton	5,608	4,430	235	35	3	4/1	12-18	145.57
Henry Ford Hospital [2,4,7]	Detroit	T. J. Heldt	723	9,006	26	12	2	4/1	12-36	175.00
Wayne County General Hospital and Infirmary [2,4]	Eloise, Mich.	.....	5,075[b]	.....	..	..	7	.....	12	.....
Kalamazoo State Hospital [2]	Kalamazoo, Mich.	R. A. Morter	3,869	1,627	295	1	5	.....	12	.....
Pontiac State Hospital [2,4]	Pontiac, Mich.	P. V. Wagley	2,318	.....	173	46	4	Varies	36	287.50
Traverse City State Hospital [2,4]	Traverse City, Mich.	R. P. Sheets	3,410[b]	.....	..	..	5	.....	12	.....
Ypsilanti State Hospital [2,4]	Ypsilanti, Mich.	O. R. Yoder	4,141	205	293	22	6	.....	12	.....
Minneapolis General Hospital [1,4,7]	Minneapolis	J. C. Michael	1,427[b]	1,286[b]	..	..	1	.....	12	.....
University Hospitals [2]	Minneapolis	J. G. McKinley	263	.....	1	1	2	7/1	36	91.50
Mayo Foundation [2]	Rochester, Minn.	H. W. Woltman	(See Neurology; also page 1354)							
St. Peter State Hospital [2]	St. Peter, Minn.	G. H. Freeman	2,884	.....	..	..	1	.....	12-24	75.00
State Hospital No. 1 [2]	Fulton, Mo.	C. C. Ault	2,556	12	232	40	4	7/1	12-24	100.00
Kansas City General Hospital [1,7]	Kansas City, Mo.	E. T. Gibson	495	554	61	12	1	Varies	12-24	75.00
State Hospital No. 2 [2]	St. Joseph, Mo.	F. A. Carmichael	3,083[b]	.....	..	..	4	.....	12-36	100.00
Barnes Hospital [4,7]	St. Louis	E. F. Gildea	530	3,245	11	6	5	7/1	12-24	25.00
City Sanitarium [2,4]	St. Louis	W. L. Moore	3,953	.....	190	41	16	.....	12	135.00
Homer G. Phillips Hospital [2]	St. Louis	E. F. Gildea	(See Neurology)				1	.....	12	.....
St. Louis City Hospital [2,4]	St. Louis	E. F. Gildea	1,695	.....	107	42	3	4/1	12-36	80.00
St. Vincent's Sanitarium [1]	St. Louis	P. E. Kubitschek	470	.....	26	13	2	7/1	12	.....
Hastings State Hospital [2,4]	Ingleside, Neb.	J. C. Nielsen	1,700	50	78	18	4	1/1, 6/1	12-60	150.00
Norfolk State Hospital [2]	Norfolk, Neb.	G. L. Sandritter	1,310	123	73	..	7	.....	12	100.00
Bishop Clarkson Memorial Hospital [2]	Omaha	A. E. Bennett	473	.....	11	8	1	.....	12	100.00
†Lutheran Hospital [1]	Omaha	A. Young	532	.....	10	7	1	6/1	12	50.00
New Hampshire State Hospital [2]	Concord, N. H.	C. H. Dolloff	3,051	.....	225	65	1	.....	12	91.75
New Jersey State Hospital [2,4]	Greystone Park, N. J.	M. A. Curry	7,051	.....	562	79	13	.....	12	176.00
New Jersey State Hospital [2,4]	Marlboro, N. J.	J. B. Gordon	3,530	1,261	238	122	7	.....	12	70.00
New Jersey State Hospital [2]	Trenton, N. J.	J. B. Spradley	4,022	.....	313	43	2	.....	12	100.00
Albany Hospital [2,4,7]	Albany, N. Y.	S. E. Barrera	1,238	939	40	21	5	4/1, 7/1	12	25.00
Hillside Hospital [2]	Bellerose, N. Y.	I. Silbermann	222	947	1	..	7	.....	12	15.00
Binghamton State Hospital [2,4]	Binghamton, N. Y.	H. S. Gregory	3,435	.....	250	15	3	.....	12	.....
Brooklyn State Hospital [2]	Brooklyn	C. H. Bellinger	5,759	4,722	942	117	12	4/1	12	225.00
Buffalo State Hospital [2,4]	Buffalo	C. Fletcher	3,102	.....	236	48	4	.....	12	.....
Edward J. Meyer Memorial Hospital [2,4]	Buffalo	A. L. Ulrich	1,339	492	93	25	3	Varies	12-36	59.00
Central Islip State Hospital [2,4]	Central Islip, N. Y.	D. Corcoran	8,530	2,392	525	174	9	.....	12	208.33
Gowanda State Homeopathic Hospital [2]	Helmuth, N. Y.	E. V. Gray	2,217	.....	209	35	6	.....	12	.....
†Pinewood Sanitarium [1]	Katonah, N. Y.	J. Epstein	232	.....	2	..	1	1/1	12	150.00
Kings Park State Hospital [2]	Kings Park, N. Y.	A. E. Soper	7,657	1,813	410	76	4	.....	12	.....
Marcy State Hospital [2]	Marcy, N. Y.	G. L. Warner	3,031	.....	227	26	4	.....	12	.....
Middletown State Homeopathic Hosp. [2,4]	Middletown, N. Y.	W. A. Schmitz	3,723	.....	194	80	4	Varies	12	225.00
Bellevue Hospital, Div. III—N. Y. Univ. [2,4]	New York City	S. B. Wortis	29,558[b]	8,803[b]	874[b]	326[b]	24[d]	Varies	12-36	25.00
Manhattan State Hospital [1,4]	New York City	J. H. Travis	5,327	.....	738	189	4	.....	12	.....

Numerical and other references will be found on page 1354.

18. PSYCHIATRY—Continued

Name of Hospital	Location	Chief of Service	Inpatients Treated [6]	Outpatient Visits	Deaths	Autopsies	Asst. Res. and Residencies [8]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
New York Hospital *[2,3,4]	New York City	O. Diethelm	210	3,769	1	..	16	4/1	12-60	$ 50.00
New York State Psychiatric Institute and Hospital [2,4]	New York City	I. H. MacKinnon	446	1,142	2	..	9	1/1, 7/1	12-24	150.00
U. S. Marine Hospital [2,7]	New York City	V. T. Davis	5,653	.....	19	11	..	.....	12	.....
St. Lawrence State Hospital [2,4]	Ogdensburg, N. Y.	J. A. Pritchard	2,209	.....	164	13	3	.....	12	.....
Rockland State Hospital [2,4]	Orangeburg, N. Y.	R. E. Blaisdell	7,894	.....	365	57	12	7/1	12	200.00
Hudson River State Hospital [2,4]	Poughkeepsie, N. Y.	J. R. Ross	5,430	2,122	361	81	2	.....	12	225.00
Creedmoor State Hospital [2]	Queens Village, N. Y.	H. A. LaBurt	6,500	2,853	505	74	3	Varies	12	225.00
Rochester State Hospital [2,4]	Rochester, N. Y.	J. L. Van De Mark	3,731	.....	284	9	3	.....	12	.....
Strong Memorial and Rochester Municipal Hospitals *[2,4]	Rochester, N. Y.	R. C. Jaenike	448	619	..	..	5	7/1	12-48	41.66
Syracuse Psychopathic Hospital [2]	Syracuse, N. Y.	H. A. Steckel	685	965	24	5	1	4/1	12-36	150.00[c]
Utica State Hospital [2,4]	Utica, N. Y.	W. E. Merriman	2,246	.....	217	27	2	.....	12	.....
Grasslands Hospital *[2,4]	Valhalla, N. Y.	J. G. Lynn	1,198	629	37	17	6	1/1	12-24	117.50
Pilgrim State Hospital [2,4]	West Brentwood, N. Y.	H. J. Worthing	11,549	2,276	550	140	20	Varies	12	208.00
New York Hospital-Westchester Division [2,4]	White Plains, N. Y.	C. O. Cheney	757	.....	11	3	6	4/1	12-36	125.00
Harlem Valley State Hospital [2,4]	Wingdale, N. Y.	A. M. Stanley	5,348	1,183	233	74	3	.....	12	225.00
Duke Hospital *[2,4]	Durham, N. C.	R. S. Lyman	302	5,086	2	2	10	4/1	12	83.33
Cincinnati General Hospital *[2,4]	Cincinnati	J. Romano	1,287	617	18	2	11	4/1	12-24	.....
Longview State Hospital [2,4]	Cincinnati	E. A. Baber	3,421	.....	162	41	3	.....	12	.....
City Hospital *[2,4]	Cleveland	L. J. Karnosh	580	1,043	29	8	4	7/1	12	50.00
†Cleveland State Hospital [1]	Cleveland	J. M. Whitworth	.....	.....	175	39	2	7/1	12-24	100.00
Columbus State Hospital [2]	Columbus, O.	J. F. Bateman	3,699	1,650	225	37	2	.....	12	.....
Massillon State Hospital [2,4]	Massillon, O.	A. G. Hyde	3,342	752	280	72	6	1/1	12	100.00
Harding Sanitarium [1]	Worthington, O.	G. T. Harding	304	.....	3	..	3	8/1	12-36	150.00
Oregon State Hospital [2]	Salem, Ore.	J. C. Evans	4,046	.....	355	37	2	.....	12	.....
Danville State Hospital [2]	Danville, Pa.	E. L. Sielke	2,781	1,787	158	19	3	.....	12	50.00
Harrisburg State Hospital [2,4]	Harrisburg, Pa.	H. K. Petry	2,860	400	150	27	3	Varies	12-60	165.00
Norristown State Hospital [2]	Norristown, Pa.	A. P. Noyes	5,081	.....	358	79	11	Varies	12	225.00
Friends Hospital [1,4]	Philadelphia	T. L. Debne	377	325	17	4	2	Varies	12-24	150.00
Institute of the Pennsylvania Hospital [2,4]	Philadelphia	E. D. Bond	807	2,450	..	..	6	Varies	12	100.00
Jefferson Medical College Hospital *[1]	Philadelphia	.....	.....	.....	..	..	1	.....	12-18	.....
Pennsylvania Hospital, Department for Mental and Nervous Diseases [2,4]	Philadelphia	E. D. Bond	522	.....	14	..	8	Varies	12	100.00
Philadelphia General Hospital *[2,4]	Philadelphia	.....	3,230	.....	344	..	1	4/1	12-36	70.00
†Philadelphia Psychiatric Hospital [1]	Philadelphia	N. W. Winkelman	.....	.....	1	1	8	Varies	12-24	166.66
Philadelphia State Hospital [2]	Philadelphia	C. A. Zeller	7,134	.....	452	79	3	.....	12	.....
Temple University Hospital *[2,4]	Philadelphia	O. S. English	.....	1,052	..	..	3	.....	12-36	50.00
St. Francis Hospital *[1,4]	Pittsburgh	H. C. Mitchell and C. H. Henninger	3,052	271	83	11	3	4/1	12-36	80.00
Western State Psychiatric Institute and Clinic [2,4]	Pittsburgh	R. A. Clark	254	554	7	4	6	4/1	12-24	80.00
Warren State Hospital [2]	Warren, Pa.	R. H. Israel	3,154	.....	247	15	6	4/1	12-36	166.66
State Hospital for Mental Diseases [2,4]	Howard, R. I.	J. F. Regan	3,473	569	324	72	8	Varies	12-36	150.00
Butler Hospital [1,4]	Providence, R. I.	A. H. Ruggles	257	50	20	1	5	4/1	12-36	.....
Charles V. Chapin Hospital [1,4]	Providence, R. I.	H. E. Klene	503	743	15	5	1	.....	12	100.00
U. S. Public Health Service Hospital [2]	Ft. Worth, Tex.	R. T. Hewitt	2,911	.....	8	6	5	.....	12	.....
†Galveston State Psychopathic Hospital [1]	Galveston, Tex.	.....	216	.....	1	1	4	Varies	12	.....
John Sealy Hospital *[2,4]	Galveston, Tex.	T. H. Harris	1,016	1,962	21	12	2	.....	12	.....
†Vermont State Hospital [1]	Waterbury, Vt.	J. E. Roy	.....	.....	118	2	2	Varies	12	.....
University of Virginia Hospital *[3,4]	Charlottesville, Va.	D. C. Wilson	1,945	1,495	4	3	8	1/1	12	25.00
Medical College of Virginia, Hosp. Div.*[3]	Richmond, Va.	R. F. Gayle	493	.....	3	1	3	4/1	12	37.50
Western State Hospital [2,4]	Ft. Steilacoom, Wash.	R. H. Rea	3,785	.....	335	74	6	.....	12	.....
Eastern State Hospital [2,4]	Medical Lake, Wash.	H. A. Perry	2,615	580	187	36	3	7/1	12-24	100.00
Northern State Hospital [2,4]	Sedro Woolley, Wash.	C. Halvorsen	2,635	200	239	128	2	Varies	12-24	.....
State of Wisconsin General Hospital *[2,4,7]	Madison, Wis.	H. H. Reese	1,242	502	31	21	2	7/1	12-36	25.00
Milwaukee County Hosp. for Mental Dis.[2,4]	Milwaukee	M. Kasak	1,534	2,400	27	13	9	1/1, 7/1	12-36	50.00
Milwaukee Sanitarium [2]	Wauwatosa, Wis.	J. A. Kindwall	450	.....	8	1	2	7/1	12-36	130.00
Queen's Hospital *[2,4]	Honolulu, Hawaii	R. Kepner	1,249	.....	5	4	1	1/1	12-24	150.00

Hospitals, 155; Assistant Residencies and Residencies, 758

19. RADIOLOGY

The following services are approved by the Council and the American Board of Radiology (See footnotes 1, 2 and 3)

United States Army.—Residencies available to medical officers, U. S. Army

†Army and Navy General Hospital [1] (Rad.)..Hot Spgs. Nat. Pk., Ark.
†Letterman General Hospital *[1] (Rad.)..San Francisco
†Fitzsimons General Hospital *[1] (Roent.)..Denver
Walter Reed General Hospital *[3] (Rad.)..Washington, D. C.
†Oliver General Hospital *[1] (D. R.)..Augusta, Ga.
†Percy Jones General Hospital *[1] (Roent.)..Battle Creek, Mich.
†Brooke General Hospital *[1] (Roent.)..San Antonio, Tex.

United States Navy.—Residencies available to medical officers, U. S. Navy

†U. S. Naval Hospital *[1] (Roent.)..Long Beach, Calif.
†U. S. Naval Hospital *[1] (Roent.)..Oakland, Calif.
†U. S. Naval Hospital *[1] (Rad.)..San Diego, Calif.
†U. S. Naval Hospital *[1] (Roent.)..Great Lakes, Ill.
†U. S. Naval Hospital *[1] (Roent.)..Bethesda, Md.
†U. S. Naval Hospital *[1] (Roent.)..Chelsea, Mass.
U. S. Naval Hospital *[2] (Roent.)..St. Albans, N. Y.
†U. S. Naval Hospital *[1] (Roent.)..Philadelphia

Name of Hospital	Location	Chief of Service	Type of Training [12]	Roentgenographic Examinations	X-Ray Treatments	Radium Treatments	Autopsy Percentage	Asst. Res. and Residencies [8]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
†Jefferson-Hillman Hospital *[1,4]	Birmingham, Ala.	M. Barfield-Carter	Rad.	12,154	6,752	145	30	3	7/1	12-36	$ 50.00
†St. Monica's Hospital *[1]	Phoenix, Ariz.	.....	Rad.	.....	.....	..	..	1	.....	12	.....
†San Joaquin General Hospital *[1]	French Camp, Calif.	A. M. Cove	Roent.	13,073	1,223	5	64	1	7/1	12-36	200.00[c]
†Cedars of Lebanon Hospital *[1]	Los Angeles	F. Freedman	Rad.	.....	.....	.....	42	1	11/1	12	100.00
Los Angeles County Hospital *[3,4]	Los Angeles	R. A. Carter	Rad.	49,100	5,967	277	34	3	Varies	12-36	157.20
†Queen of Angels Hospital *[1]	Los Angeles	L. S. Goin	Rad.	7,112	2,395	58	31	1	Varies	12-36	100.00
St. Vincent's Hospital *[2]	Los Angeles	K. S. Davis	Rad.	7,917	1,231	27	43	1	.....	12	.....
White Memorial Hospital *[2]	Los Angeles	W. L. Stilson	Rad.	12,636	6,949	432	58	2	4/1	12	31.00
†Permanente Foundation Hospital *[1,4]	Oakland, Calif.	O. Hatschek	Rad.	32,670	2,819	61	77	1	.....	12-36	125.00
Orange County General Hospital *[1]	Orange, Calif.	W. Saul	Roent.	1,197	966	4	28	1	7/1	12	110.00
†Collis P. and Howard Huntington Memorial Hospital *[1]	Pasadena, Calif.	J. F. Chapman	Roent.	.....	3,744	..	57	1	.....	12	.....
†Franklin Hospital *[1,4]	San Francisco	L. Bryan	Roent.	7,392	1,592	6	46	1	7/1	12-36	75.00

Numerical and other references will be found on page 1354.

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19. RADIOLOGY—Continued

Name of Hospital	Location	Chief of Service	Type of Training [13]	Roentgenographic Examinations	X-Ray Treatments	Radium Treatments	Autopsy Percentage	Asst., Res. and Residencies [6]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Mount Zion Hospital [*1]	San Francisco	J. Levitin	Roent.	3,568	628	10	47	1	7/1	12	$ 75.00
San Francisco Hospital [*2,4]	San Francisco		Rad.	53,605	2,536	26	27	4	.....	12	80.00
Stanford University Hospitals [*3,4]	San Francisco	R. R. Newell	Rad.	15,740	7,534	233	43	4	7/1	12	50.00
University of California Hospital [*2,4]	San Francisco	E. R. Miller	Rad.	16,476	16,039	100	76	4	Varies	12	65.00
†**Santa Clara County Hospital** [*1]	San Jose, Calif.	T. N. Foster	Roent.	4,136	1,294	8	23	1	7/1	12-36	150.00
Veterans Administration Center [5]	W. Los Angeles		Rad.	.....	.....	..	.....	..	.....	.....	.....
Colorado General Hospital [*2]	Denver	E. A. Schmidt	Rad.	11,684	2,880	15	78	2	.....	12	.....
†**Presbyterian Hospital** [*1]	Denver	K. D. Allen	Rad.	8,784	4,389	36	28	2	7/1	12-36	75.00
†**St. Luke's Hospital** [*1]	Denver	W. P. Stampfli	Rad.	3,498	1,057	62	36	1	7/1	12-36	50.00
†**Corwin Hospital** [*1]	Pueblo, Colo.	G. A. Unfug	Roent.	7,112	2,350	6	34	1	Varies	12-36	.....
†**Bridgeport Hospital** [*1]	Bridgeport, Conn.	B. M. Parmelee	Rad.	.....	.....	..	27	1	.....	12	.....
Hartford Hospital [*3]	Hartford, Conn.	D. J. Roberts	Rad.	13,071	6,234	79	39	1	Varies	12	50.00
Grace—New Haven Community Hospital,											
†**Grace Unit** [*1]	New Haven, Conn.	R. M. Lowman	Rad.	4,875	976	387	25	2	7/1	12-36	41.67
New Haven Unit [*3,4]	New Haven, Conn.	H. Wilson	Rad.	23,160	3,877	50	54	4	.....	12	*
†**Hospital of St. Raphael** [*1]	New Haven, Conn.	F. D. Stasio	Roent.	5,814	849	3	21	1	1/1, 7/1	12-36	50.00
†**Delaware Hospital** [*1]	Wilmington, Del.	W. W. Lattomus	D.R.	16,079	1,337	62	25	1	9/1	12	100.00
†**Gallinger Municipal Hospital** [*1,4]	Washington, D. C.	H. R. Reed	Rad.	13,708	943	15	50	1	Varies	12-36	62.50
Garfield Memorial Hospital [*3,4]	Washington, D. C.	E. A. Merritt	Rad.	8,473	16,989	179	79	3	.....	12	75.00
Georgetown University Hospital [*2]	Washington, D. C.	F. G. Coe	Rad.	6,080	3,929	59	49	2	4/1	12-24	75.00
Sibley Memorial Hospital [*3]	Washington, D. C.	W. M. Clopton	Rad.	7,337	1,523	27	58	1	.....	12	100.00
Veterans Administration Hospital [2]	Washington, D. C.	S. R. Bersack	Rad.	.....	.....	..	24	..	.....	12	.....
James M. Jackson Memorial Hospital [*2]	Miami, Fla.	K. A. Bibby	Rad.	22,742	3,650	34	30	1	.....	12	.....
Grady Memorial Hospital [*2]	Atlanta, Ga.	H. S. Weens	Rad.	19,353	165	..	23	3	7/1	12	30.00
Piedmont Hospital [*3]	Atlanta, Ga.	W. E. Carskadon	Rad.	2,601	1,035	..	43	1	.....	12	.....
†**University Hospital** [*1,4]	Augusta, Ga.	L. P. Holmes	Rad.	24,750	3,430	298	19	1	7/1	12-24	40.00
†**Emory University Hospital** [*1]	Emory University, Ga.	W. W. Bryan	Rad.	25,406	4,752	109	27	2	7/1	12-36	.....
Augustana Hospital [*1]	Chicago	D. S. Beilin	Rad.	17,448	9,660	..	28	1	10/1	12-36	50.00
Cook County Hospital [*3,4]	Chicago	G. M. Landau	Rad.	44,885	21,125	91	30	4	.....	12-36	25.00
†**Edgewater Hospital** [*1]	Chicago	N. S. Zeitlin	Roent.	.....	.....	..	39	1	.....	12-36	50.00
†**Mercy Hospital-Loyola Univ.- Clinics** [*1,4]	Chicago	W. W. Furey	Rad.	7,200	7,812	288	45	2	Varies	12-36	50.00
Michael Reese Hospital [*3,4]	Chicago	R. A. Arens	Rad.	30,797	16,312	4,324	50	2	.....	36	.....
Mount Sinai Hospital [*2,4]	Chicago	J. Arendt	Roent.	6,131	2,635	5	41	2	12/46	12	100.00
Passavant Memorial Hospital [*3,4]	Chicago	J. T. Case	Rad.	5,277	85	6	61	2	.....	12	.....
Presbyterian Hospital [*3]	Chicago	F. H. Squire	Rad.	19,624	6,730	43	57	2	4/1	12-36	50.00
Provident Hospital [*2,4]	Chicago	B. W. Anthony	Rad.	3,532	794	..	34	1	.....	12	50.00
†**Ravenswood Hospital** [*1]	Chicago	D. L. Jenkinson	Rad.	7,499	2,035	..	19	1	3/1	12-36	125.00
Research and Educational Hospitals [*3,4]	Chicago	T. J. Wachowski	Rad.	11,942	11,598	252	89	3	.....	12-36	55.00
†**St. Joseph Hospital** [*1]	Chicago	W. E. Anspach	Roent.	3,988	1,219	..	36	2	.....	12-36	.....
St. Luke's Hospital [*3]	Chicago	E. L. Jenkinson	Rad.	26,896	5,452	32	61	5	7/1	12-36	25.00
University of Chicago Clinics [*3]	Chicago	P. C. Hodges	Rad.	18,318	6,822	80	76	5	.....	12-36	25.00
Wesley Memorial Hospital [*2,4]	Chicago	F. L. Hussey	Rad.	16,137	1,191	..	59	1	Varies	12-36	25.00
†**St. Francis Hospital** [*1]	Evanston, Ill.	A. C. Ledoux	Rad.	10,568	949	52	31	1	Varies	12-36	75.00
Evanston Hospital [*3]	Evanston, Ill.	E. R. Crowder	Rad.	13,577	1,742	..	85	2	.....	12-18	50.00
†**Little Company of Mary Hospital** [*1]	Evergreen Park, Ill.	W. W. Furey	D.R.	7,411	1,492	63	21	1	Varies	12	50.00
Veterans Administration Center [5]	Hines, Ill.	C. W. McClanahan and H. Slobodin	Rad.	.....	.....	..	.....	..	.....	.....	.....
St. Francis Hospital [*2,4]	Peoria, Ill.	P. R. Dirkse	Rad.	8,089	3,084	5	33	1	8/1	12-24	150.00
St. Margaret Hospital [*2]	Hammond, Ind.	C. W. Rauschenbach	Roent.	3,920	592	17	33	1	2/15	12-36	15.00
Indianapolis City Hospital [*3]	Indianapolis	J. A. Campbell	Rad.	11,058	3,298	49	38	2	.....	12	.....
Indiana University Medical Center [*3,4]	Indianapolis	J. A. Campbell	Rad.	15,769	7,043	125	61	3	4/1	12-36	33.33
Methodist Hospital [*2]	Indianapolis	H. C. Oehsner	Rad.	16,083	4,639	..	27	2	.....	12-24	180.00
University Hospitals [*3,4]	Iowa City, Ia.	H. D. Kerr	Rad.	23,633	17,481	17	41	9	.....	12	.....
University of Kansas Hospitals [*3,4]	Kansas City, Kan.	G. M. Tice	Rad.	28,454	8,177	226	57	2	.....	12	50.00
Charity Hospital of Louisiana [*3,4]	New Orleans	L. Menville	Rad.	48,600	17,103	388	42	6	Varies	12-36	25.00
Southern Baptist Hospital [*3]	New Orleans	L. W. Magruder	Rad.	9,033	486	..	17	1	4/1	15	150.00
Touro Infirmary [*3]	New Orleans	M. D. Teitelbaum	Rad.	30,077	4,750	..	53	1	.....	12	.....
Shreveport Charity Hospital [*3]	Shreveport, La.	G. W. Riley	Rad.	5,494	7,426	75	41	2	.....	12-36	60.00
†**Baltimore City Hospital** [*1,4]	Baltimore	F. B. Mandeville	Rad.	8,483	95	..	47	2	7/1	12-36	60.00
Johns Hopkins Hospital [*3,4]	Baltimore	J. W. Pierson	Rad.	114,252	8,486	140	58	5	4/1	12	.....
University Hospital [*3,4]	Baltimore	W. L. Kilby	Rad.	22,875	4,232	260	43	3	4/1	12	50.00
Beth Israel Hospital [*2]	Boston	S. A. Robins	Rad.	2,402	2,327	16	50	2	4/1	36	41.66
Boston City Hospital [*3,4]	Boston	M. Ritvo	Rad.	53,174	5,124	46	27	4	.....	12	50.00
Children's Hospital [*1,4]	Boston	E. B. D. Neuhauser	Roent.	12,852	867	..	74	1	.....	12	.....
Joseph H. Pratt Diagnostic Hospital [1]	Boston	A. Ettinger	Roent.	9,701	1,505	..	39	1	.....	12	.....
Lahey Clinic [3]	Boston	H. F. Hare	Rad.	50,000	7,200	60	70	3	Varies	12-36	125.00
Massachusetts General Hospital [*3]	Boston	W. Holmes	Rad.	.....	.....	..	63	3	.....	12	.....
Massachusetts Memorial Hospitals [*3,4]	Boston	G. Levene	Rad.	9,833	2,921	50	71	3	.....	36	50.00
New England Deaconess Hospital [2]	Boston	J. H. Marks	Rad.	.....	.....	..	51	1	.....	12	.....
Peter Bent Brigham Hospital [*3]	Boston	M. C. Sosman	Rad.	30,000	3,000	250	80	3	7/1	12-36	41.66
Newton-Wellesley Hospital [*2,4]	Newton, Mass.	C. R. Ashman	Roent.	7,359	1,788	..	18	1	11/1	24	100.00
†**Quincy City Hospital** [*1]	Quincy, Mass.	W. S. Altman	Roent.	5,571	531	16	70	1	7/1	12-36	83.33
Salem Hospital [*3]	Salem, Mass.	S. A. Wilson	Rad.	7,321	1,197	17	38	1	1/1, 7/1	12-36	50.00
St. Joseph's Mercy Hospital [*3]	Ann Arbor, Mich.	S. W. Donaldson	Rad.	9,673	1,962	51	43	1	7/1	12-36	300.00
University Hospital [*3,4]	Ann Arbor, Mich.	F. J. Hodges	Rad.	36,087	14,790	295	56	6	.....	12	101.00
City of Detroit Receiving Hospital [*2,4]	Detroit	J. C. Kenning	Roent.	17,886	.....	..	40	2	.....	12	.....
Grace Hospital [*3]	Detroit	R. H. Stevens	Rad.	11,622	5,448	27	30	3	4/1	12-36	125.00
Harper Hospital [*3,4]	Detroit	L. Reynolds	Rad.	.....	.....	..	40	3	.....	12	85.00
Henry Ford Hospital [*3,4]	Detroit	H. P. Doub	Rad.	40,649	4,640	205	62	4	4/1	12-36	175.00
†**Herman Kiefer Hospital** [1]	Detroit	C. C. Birkelo	Roent.	33,328	3,928	..	46	1	7/1	12-24	200.00[c]
†**Providence Hospital** [*1]	Detroit	W. A. Irwin	Rad.	13,873	7,755	280	61	1	7/1	12-36	140.00[c]
Ste Mary's Hospital [*3]	Detroit	J. E. Lofstrom	Rad.	9,571	4,297	57	60	3	.....	12	.....
Hurley Hospital [*3]	Flint, Mich.	M. W. Clift	Rad.	17,540	4,187	60	23	1	7/1	12	.....
St. Mary's Hospital [*1]	Duluth, Minn.	J. R. McNutt	Rad.	6,744	2,960	12	85	1	.....	12	.....
University Hospitals [*3,4]	Minneapolis	G. Rigler	Rad.	24,095	11,057	609	67	3	7/1	36	91.50
Mayo Foundation [5]	Rochester, Minn.	B. R. Kirklin	Rad.	(See page 1354)				15	.....	12	.....
†**Ellis Fischel State Cancer Hospital** [1]	Columbia, Mo.	D. V. LeMone	Rad.	2,944	19,027	15	64	1	7/1	12-24	50.00
†**Kansas City General Hospital** [*1]	Kansas City, Mo.	L. Scarpellino and D. S. Dann	Rad.	11,047	.....	141	49	2	7/1	12-36	75.00
Research Hospital [*3]	Kansas City, Mo.	I. H. Lockwood	Rad.	24,780	2,101	393	56	3	.....	12	.....
St. Joseph Hospital [*2]	Kansas City, Mo.	C. E. Virden	Rad.	8,035	3,890	775	56	1	.....	12	.....
†**St. Luke's Hospital** [*1]	Kansas City, Mo.	L. A. Scarpellino	Rad.	6,844	1,269	81	61	1	7/1	12-36	50.00
†**St. Mary's Hospital** [*1]	Kansas City, Mo.	E. R. Deweese	Rad.	2,237	261	33	56	2	4/1	12-36	100.00
Barnes Hospital [*3]	St. Louis	S. Moore	Rad.	22,793	7,078	87	67	3	7/1	12-36	25.00
Homer G. Phillips Hospital [*3]	St. Louis	E. W. Spinzig	Rad.	12,941	1,311	46	24	1	10/1	12	80.00
St. Louis City Hospital [*3,4]	St. Louis	L. Sante	Rad.	22,705	1,628	253	50	3	4/1	12-36	80.00
St. Luke's Hospital [*3]	St. Louis	O. C. Zink	Rad.	5,810	1,293	149	39	1	7/1	12	75.00
St. Mary's Group of Hospitals [*3]	St. Louis	L. R. Sante	Rad.	15,063	1,179	65	45	3	7/1	12-36	35.00
Creighton Memorial St. Joseph's Hosp. [*3,4]	Omaha	J. F. Kelly	Rad.	12,275	1,445	187	43	1	.....	12	.....
University of Nebraska Hospital [*3]	Omaha	H. B. Hunt	Rad.	3,901	2,224	123	98	2	.....	12	.....

Numerical and other references will be found on page 1354.

19. RADIOLOGY—Continued

Name of Hospital	Location	Chief of Service	Type of Training [13]	Roentgenographic Examinations	X-Ray Treatments	Radium Treatments	Autopsy Percentage	Asst., Res. and Residencies [a]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Mary Hitchcock Memorial Hospital [a2]	Hanover, N. H.	L. K. Sycamore	Rad.	5,211	1,716	33	87	1	.....	12	.....
†Atlantic City Hospital [a1]	Atlantic City, N. J.	C. B. Kalghn	Rad.	4,811	1,500	62	21	1	7/1	12-24	.....
Newark Beth Israel Hospital [a1,4]	Newark, N. J.	N. J. Furst	Rad.	5,155	3,915	196	32	1	4/1	12	$100.00
†Albany Hospital [a1,4]	Albany, N. Y.	W. P. Howard	Roent.	15,182	4,077	303	57	2	4/1	12-36	25.00
†Beth Moses Hospital [a1,4]	Brooklyn	A. A. Held	Roent.	2,945	169	22	18	1	.....	12	125.00
Brooklyn Hospital [a2,4]	Brooklyn	J. Pepe	Rad.	7,260	1,963	122	31	1	4/1	12-15	85.00
Jewish Hospital [a1,4]	Brooklyn	M. G. Wasch	Rad.	12,680	2,993	50	35	2	4/1	18	25.00
Kings County Hosp. [a4] (D. R.[2] Ther. Rad.[1])	Brooklyn	B. Ehrenpreis D.R.Ther.Rad.		44,969[b]	15,247[b]	909[b]	16	2	7/1	12-24	25.00
Long Island College Hospital [a2,4]	Brooklyn	A. L. L. Bell	Rad.	13,704	3,220	81	39	4	.....	12-24	25.00
Methodist Hospital [a2]	Brooklyn	J. J. Daversa	Rad.	5,955	1,751	70	..	1	.....	12	.....
Edward J. Meyer Memorial Hospital [a3,4]	Buffalo		Rad.	32,913	2,032	22	39	3	Varies	12-36	50.00
Meadowbrook Hospital [a2]	Hempstead, N. Y.	G. L. Carr	Rad.	4,761	2,823	18	47	1	.....	12	.....
Queens General Hospital [a2,4]	Jamaica, N. Y.	I. S. Startz	Rad.	23,590	6,986	31	44	3	.....	12	70.00
New Rochelle Hospital [a2]	New Rochelle, N. Y.		Roent.	7,924	1,435	10	40	1	3/1	12	125.00
Bellevue Hospital, Div. III—N. Y. Univ. [a1,4]	New York City	I. I. Kaplan	Ther.Rad.	.....	8,562[b]	654[b]	28[b]	4	.....	12	.....
Bellevue Hospital, Div. IV—Open Div. [a1,4]	New York City	L. J. Friedman	D.R.	94,253[b]	.....	..	28[b]	5	Varies	12-18	45.00
Beth Israel Hospital [a1,4]	New York City	A. Bendick	Rad.	5,497	1,868	66	29	3	4/1	12-24	50.00
Bronx Hospital [a2,4]	New York City	W. Snow	Rad.	4,356	2,125	31	20	2	4/1	12-24	100.00
Flower and Fifth Avenue Hospitals [a2,4]	New York City	F. Borrell	Rad.	7,660	2,449	35	32	2	.....	12	.....
French Hospital [a2]	New York City	E. M. Claiborne	Rad.	8,279	1,550	25	31	1	2/1	12-24	50.00
Goldwater Memorial Hospital [a2,4]	New York City	H. K. Taylor	Roent.	8,506	317	..	38	1	4/1	12-36	100.00
Hospital for Joint Diseases [a3,4]	New York City	M. M. Pomeranz	Rad.	14,322	1,677	4	22	1	.....	12	.....
Lenox Hill Hospital [a2,4]	New York City	F. Ruber	Roent.	15,264	2,725	22	39	1	7/1	12	50.00
Lincoln Hospital [a1,4]	New York City	E. Kraft	Rad.	16,098	400	12	27	1	.....	12	.....
Memorial Hospital [a1]	New York City	R. Herendeen	D.R.	23,309	.....	..	36	2	Varies	12-24	50.00
Metropolitan Hospital [a2,4]	New York City	T. B. Weinberg	Rad.	16,275	.....	..	19	1	12/31	12	.....
Montefiore Hosp. for Chronic Diseases [a2]	New York City	S. Fineman	Rad.	7,765[b]	5,604[b]	41[b]	53	3	1/1, 7/1	12	50.00
Morrisania City Hospital [a2,4]	New York City	S. Weiss	Rad.	14,945	2,230	20	16	1	.....	12	.....
Mount Sinai Hospital [a3,4]	New York City	M. L. Sussman	Rad.	23,337	6,862	52	63	4	1/1, 7/1	24	30.00
New York City Hospital [a1]	New York City	C. Gottlieb	D.R.	7,405	.....	..	40	1	7/1	12	100.00
New York Hospital [a3,4]	New York City	H. L. Temple	Rad.	44,867	8,811	..	57	3	.....	12	.....
New York Polyclinic Medical School and Hospital [a2]	New York City	E. E. Smith	Rad.	6,144	2,230	23	17	1	.....	12	25.00
New York Post-Graduate Medical School and Hospital [a2]	New York City	W. H. Meyer	Rad.	8,440	3,075	743	48	3	1/1, 7/1	12-24	30.00
Presbyterian Hospital [a3,4]	New York City	R. Golden	Rad.	54,435	21,984	201	52	6	.....	12	41.67
Roosevelt Hospital [a1,4]	New York City	W. H. Boone	Rad.	17,675	2,500	..	32	3	.....	12-36	70.00
St. Luke's Hospital [a2]	New York City	C. W. Breimer	Rad.	20,144	5,330	151	33	2	7/1	12-36	50.00
Sydenham Hospital [a1]	New York City	A. S. Unger	D.R.	4,280	261	..	21	1	1/1, 7/1	12-24	100.00
Genesee Hospital [a1,4]	Rochester, N. Y.	S. Larson	Roent.	4,780[b]	1,273[b]	..	48	1	.....[x]	12	.....
Rochester General Hospital [a3,4]	Rochester, N. Y.	L. R. Limgeman	Rad.	9,787	3,423	16	75	1	7/1	12-36	85.00
Strong Memorial and Rochester Municipal Hospitals [a3,4]	Rochester, N. Y.	G. H. Ramsey	Rad.	24,703	6,358	246	73	5	7/1	12-48	83.33
Ellis Hospital [a1,4]	Schenectady, N. Y.	K. L. Mitton	Roent.	7,995	1,842	..	22	1	.....	12	.....
†U. S. Marine Hospital [a1]	Stapleton, S. I., N. Y.	W. M. Sennott	Roent.	38,500	1,447	..	58	2	7/1	12-24	.....
Sea View Hospital [1,4]	Staten Island, N. Y.	P. Slater	Rad.	14,664	.....	..	..	1	1/1, 7/1	12	120.00
†Crouse-Irving Hospital [a1]	Syracuse, N. Y.	C. F. Potter	Roent.	4,257	598	..	18	1	7/1	12-36	.....
Grasslands Hospital [a2,4]	Valhalla, N. Y.	A. G. Debbie	Rad.	10,666	6,152	24	53	2	1/1, 4/1	12-24	75.00
Charlotte Memorial Hospital [a1,4]	Charlotte, N. C.	A. Tuggle	Rad.	43,403	2,359	..	48	1	.....	12-36	.....
Duke Hospital [a3,4]	Durham, N. C.	R. J. Reeves	Rad.	32,603	9,070	352	60	7	.....	12	.....
Watts Hospital [a2]	Durham, N. C.	F. W. Vaughan	Rad.	18,534	3,284	163	31	1	.....	12	.....
North Carolina Baptist Hospital [a3,4]	Winston-Salem, N. C.	J. P. Rousseau	Rad.	17,828	4,923	108	57	3	7/1	12	41.66
City Hospital [a2]	Akron, O.	F. T. Moore	Rad.	14,361	6,027	93	26	2	.....	12	100.00
†Peoples Hospital [a1]	Akron, O.	E. L. Yoke	Rad.	5,729	5,447	56	47	1	7/1	12-36	100.00
Cincinnati General Hospital [a2]	Cincinnati	H. G. Reineke	Rad.	15,012	9,781	83	41	7	.....	12	.....
Jewish Hospital [a2,4]	Cincinnati	S. Brown	Rad.	7,142	1,128	57	34	1	4/1	12-24	.....
City Hospital [a2,4]	Cleveland	H. Hauser	Rad.	21,792	6,307	..	35	4	7/1	12	50.00
Cleveland Clinic Foundation Hospital [3]	Cleveland	C. R. Hughes	Rad.	36,740	8,898	..	32	6	.....	12	100.00
†Lutheran Hospital [a1,4]	Cleveland	J. A. Groh	Rad.	7,331	1,001	..	40	1	7/1	12-36	100.00
†Mount Sinai Hospital [a1,4]	Cleveland	E. J. Freedman	Rad.	6,403	1,757	60	34	1	7/1	12	100.00
St. Luke's Hospital [a2]	Cleveland	R. J. May	Rad.	19,112	2,128	81	46	3	4/1	12-36	50.00
St. Vincent Charity Hospital [a3]	Cleveland	J. R. Andrews	Rad.	8,437	490	30	24	1	.....	12	.....
University Hospitals [a3,4]	Cleveland	H. Hauser	Rad.	.....	.....	..	54	2	4/1	12	24.96
Starling-Loving University Hospital [a3,4]	Columbus, O.	H. J. Means	Rad.	8,554	2,583	41	40	3	4/1	12-24	50.00
†Miami Valley Hospital [a1]	Dayton, O.	J. T. McGreer	Rad.	7,923	1,701	48	37	1	Varies	12-36	75.00
St. Vincent's Hospital [a1]	Toledo, O.	C. E. Hufford	Rad.	14,055	5,725	69	22	1	.....	12-36	.....
†Youngstown Hospital [a1]	Youngstown, O.	E. C. Baker	Rad.	18,853	10,587	42	16	1	4/1	12-36	125.00
University Hospitals [a1]	Oklahoma City	J. E. Heatley	Rad.	11,427	11,129	..	30	1	.....	12	.....
Good Samaritan Hospital [a2]	Portland, Ore.	C. P. Wilson	Rad.	7,899	1,418	44	51	1	.....[x]	12	.....
St. Vincent's Hospital [a2]	Portland, Ore.	S. E. Rees	Rad.	7,259[b]	1,746[b]	..	38	1	.....	12	.....
University of Oregon Medical School Hospitals and Clinics [a2,4]	Portland, Ore.	W. Y. Burton	Rad.	13,177	4,286	22	45	3	Varies	12-36	75.00
Abington Memorial Hospital [a3]	Abington, Pa.	J. D. Zulick	Rad.	11,967	2,576	73	37	1	.....	36	50.00
Bryn Mawr Hospital [a2]	Bryn Mawr, Pa.	R. S. Bromer	Rad.	10,134	3,458	201	41	2	4/1	12	125.00
Geo. F. Geisinger Memorial Hospital [a2]	Danville, Pa.	S. J. Hawley	Roent.	7,080	1,789	29	32	1	7/1	12	75.00
†American Oncologic Hospital [1,4]	Philadelphia	W. S. Newcomet	Ther.Rad.	646	7,026	230	71	1	8/1	12-36	100.00
†Germantown Dispensary and Hospital [a1]	Philadelphia	T. P. Loughery	Rad.	14,809	1,194	45	44	1	7/1	12-24	50.00
Graduate Hospital of the University of Pennsylvania [a2]	Philadelphia	A. Finkelstein	Rad.	10,958	2,634	45	43	2	7/1	12-24	.....
Hahnemann Hospital [a2,4]	Philadelphia	N. V. Ludwick	Rad.	11,735	3,341	358	60	2	.....	12	.....
Hospital of the Protestant Episcopal Church [a2,4]	Philadelphia	D. A. Sampson	Rad.	9,301	1,931	26	47	1	.....	12	.....
Hosp. of the Univ. of Pennsylvania [a3,4]	Philadelphia	E. P. Pendergrass	Rad.	64,458	20,968	123	63	12	4/1	12-36	.....
Jeanes Hospital [2]	Philadelphia	E. L. Lane	Ther.Rad.	1,659	2,380	71	62	1	.....	12	.....
Jefferson Medical College Hospital [a3]	Philadelphia	P. V. Swenson	Rad.	26,433	.....	1,650	52	4	.....	12	.....
Jewish Hospital [a3,4]	Philadelphia	L. Solis-Cohen	Rad.	7,993	3,614	..	58	1	.....	12	.....
Lankenau Hospital [a2]	Philadelphia	J. T. Farrell, Jr.	Rad.	8,243	1,625	90	53	1	7/1	12-36	100.00
Mount Sinai Hospital [a2,4]	Philadelphia	G. Rosenbaum and L. Edeiken	Rad.	6,226	708	240	58	1	4/1	12	75.00
Pennsylvania Hospital [a2]	Philadelphia	P. A. Bishop	Rad.	9,366	1,646	155	40	1	11/1	12-36	20.00
Philadelphia General Hospital [a2,4]	Philadelphia	B. E. Widmann	Rad.	17,290	10,740	256	53	1	4/1	12-36	70.00
Presbyterian Hospital [a2,4]	Philadelphia	J. H. Vastine	Rad.	.....	.....	..	69	1	.....	12	.....
Temple University Hospital [a2,4]	Philadelphia	W. E. Chamberlain	Rad.	25,800	4,264	88	42	3	.....	12-36	50.00
Elizabeth Steel Magee Hospital [3,4]	Pittsburgh	S. G. Henderson	Rad.	4,192	2,301	113	40	2	.....[x]	12	100.00
Mercy Hospital [a1,4]	Pittsburgh	J. A. L. McCullough	Rad.	15,546	5,962	165	23	1	4/1	12	.....
Montefiore Hospital [a2]	Pittsburgh	M. F. Goldsmith	Rad.	5,471	1,017	..	35	1	1/1	12	50.00
†St. Francis Hospital [a1]	Pittsburgh	L. H. Osmond	Rad.	18,184	2,533	20	19	1	Varies	12-36	100.00
Western Pennsylvania Hospital [a2,4]	Pittsburgh	R. G. Alley and L. Freedman	Rad.	14,967	5,297	136	26	1	.....	12	.....

Numerical and other references will be found on page 1354.

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19. RADIOLOGY—Continued

Name of Hospital	Location	Chief of Service	Type of Training [12]	Roentgenographic Examinations	X-Ray Treatments	Radium Treatments	Autopsy Percentage	Asst. Res. and Residencies *	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
†Reading Hospital *[1,4]	Reading, Pa.	G. W. Chamberlin	Rad.	6,638	2,902	5	64	2	10/1	12-36	$ 50.00
Robert Packer Hospital *[3]	Sayre, Pa.	S. P. Perry	Rad.	8,886	3,016	59	41	1	.....	12	.....
†Columbia Hospital *[1]	Wilkinsburg, Pa.	W. J. McGregor	Roent.	5,467	1,959	..	13	1	.....	12	.....
†Rhode Island Hospital *[1]	Providence, R. I.	L. A. Martineau	Rad.	15,646	3,326	228	58	1	.....	12-36	50.00
Roper Hospital *[3]	Charleston, S. C.	H. Rudisill, Jr.	Rad.	9,700	2,684	79	43	2	.....	12	.....
Baptist Memorial Hospital *[3]	Memphis, Tenn.	J. E. Whiteleather	Rad.	9,810	4,050	512[b]	22	3	.....	12	.....
John Gaston Hospital *[3]	Memphis, Tenn.	H. Curl	Rad.	9,691	1,381	37	48	3	.....	12	.....
Methodist Hospital *[3]	Memphis. Tenn.	J. C. King	Rad.	10,754	2,819	13	23	1	.....	12	.....
†Geo. W. Hubbard Hospital of Meharry Medical College *[1]	Nashville, Tenn.	L. D. Scott	Rad.	3,048	3,092	24	30	2	.....	12-36	100.00
Vanderbilt University Hospital *[3,4]	Nashville, Tenn.	C. C. McClure	Rad.	12,104	3,248	..	53	1	.....	12	.....
Baylor University Hospital *[3,4]	Dallas, Tex.	F. Windrow	Rad.	7,514	1,943	57	24	2	.....	12-24	50.00
Parkland Hospital *[3,4]	Dallas, Tex.	M. L. Mazer	Rad.	14,038	2,001	42	29	2	.....	12	.....
John Sealy Hospital *[3,4]	Galveston, Tex.	J. B. Johnson	Rad.	14,184	1,239	..	60	3	.....	12	.....
†Methodist Hospital *[1,4]	Houston, Tex.	C. H. Burge	Roent.	2,981	2,094	29	32	2	7/1	12-36	.....
†St. Joseph's Infirmary [1]	Houston, Tex.	C. P. Harris	Rad.	8,344	2,309	38	38	1	.....	12	.....
†Santa Rosa Hospital *[1]	San Antonio, Tex.	M. Davis	D.R.	10,919	1,172	33	21	1	7/1	12-24	.....
Scott and White Hospital *[3]	Temple, Tex.	C. A. Stevenson	Rad.	39,976	4,662	272	34	2	.....	12	.....
†Salt Lake County General Hospital *[1]	Salt Lake City	M. L. Allen	D.R.	4,213	351	5	58	1	7/1	12-36	50.00
Mary Fletcher Hospital *[1]	Burlington, Vt.	A. B. Soule Jr. and O. S. Peterson Jr.	Rad.	4,905	3,554	210	46	2	1/1	12	50.00
University of Virginia Hospital *[3,4]	Charlottesville, Va.	V. W. Archer	Rad.	20,365	5,656	..	41	9	7/1	12	.....
Medical College of Virginia, Hosp. Div. *[3,4]	Richmond, Va.	W. W. Wadeville	Rad.	18,885	3,822	140	32	1	.....	12	.....
Virginia Mason Hospital *[3]	Seattle, Wash.	T. B. Carlile	Rad.	15,640	3,471	75	44	1	.....	12	100.00
State of Wisconsin General Hospital *[3,4]	Madison, Wis.	E. A. Pohle	Rad.	27,368	9,537	237	61	5	7/1	12-36	25.00
Columbia Hospital *[3]	Milwaukee	S. A. Morton	Rad.	19,445	3,760	104[b]	50	1	1/1	36	50.00
†Milwaukee Hospital *[1,4]	Milwaukee	C. A. H. Fortier	Rad.	14,664	1,158	22	40	1	7/1	12-60	75.00

Hospitals, 223; Assistant Residencies and Residencies, 467

20. SURGERY

United States Army.—Residencies available to medical officers, U. S. Army

Fitzsimons General Hospital *.....Denver Wm. Beaumont General Hosp.*....El Paso, Tex. Brooke General Hospital *....San Antonio, Tex.

United States Navy.—Residencies available to medical officers, U. S. Navy.

U. S. Naval Hospital *...Long Beach, Calif.
U. S. Naval Hospital *.....Oakland, Calif.
U. S. Naval Hospital *.....San Diego, Calif.
U. S. Naval Hospital *....Jacksonville, Fla.
U. S. Naval Hospital *.....Key West, Fla.
U. S. Naval Hospital *.....Pensacola, Fla.
U. S. Naval Hospital *.....Great Lakes, Ill.
U. S. Naval Hospital *.....New Orleans, La.
U. S. Naval Hospital *.....Annapolis, Md.
U. S. Naval Hospital *.....Baltimbridge, Md.
U. S. Naval Hospital *.....Bethesda, Md.
U. S. Naval Hospital *.....Chelsea, Mass.
U. S. Naval Hospital *.....Brooklyn
U. S. Naval Hospital *.....St. Albans, N. Y.
U. S. Naval Hospital.....Sampson, N. Y.
U. S. Naval Hospital *.....Camp Lejeune, N. C.
U. S. Naval Hospital *.....Philadelphia
U. S. Naval Hospital *.....Newport, R. I.
U. S. Naval Hospital *.....Memphis, Tenn.
U. S. Naval Hospital *.....Corpus Christi, Tex.
U. S. Naval Hospital *.....Norfolk, Va.
U. S. Naval Hospital *.....Portsmouth, Va.
U. S. Naval Hospital *.....Quantico, Va.

Name of Hospital	Location	Chief of Service	Inpatients Treated *	Outpatient Visits	Deaths	Autopsies	Asst. Res. and Residencies *	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Jefferson and Hillman Hospitals *[4]	Birmingham, Ala.	J. M. Mason	2,009	5,328	106	41	4	7/1	12-36	$ 50.00
Norwood Hospital *[4]	Birmingham, Ala.	C. N. Carraway and D. F. Talley	1,974	10,757	15	5	3	.....	24-36	100.00
Employees' Hospital of the Tennessee Coal, Iron and Railroad Company *	Fairfield, Ala.	L. Noland	790	5,904	16	2	2	7/1	12	150.00
St. Joseph's Hospital *	Phoenix, Ariz.	.....	.....	.....	...	..	1	.....	12	.....
Baptist State Hospital *	Little Rock, Ark.	R. M. Eubanks	3,282	.....	101	23	2	.....	12	.....
San Joaquin General Hospital *	French Camp, Calif.	H. J. Bollinger	839	6,887	36	30	3	7/1	12-36	200.00
General Hospital of Fresno County *	Fresno, Calif.	C. M. Vanderburgh	569	2,850	...	..	4	7/1	12	100.00
California Hospital *[4]	Los Angeles	W. H. Olds	2,580	323	64	35	3	7/1	12-36	200.00
Cedars of Lebanon Hospital *[4]	Los Angeles	L. Felger	1,928	3,060	80	35	2	4/1	12	100.00
Hospital of the Good Samaritan *	Los Angeles	.....	3,335	.....	...	..	4	7/1	12-36	200.00
Los Angeles County Hospital *[4]	Los Angeles	J. N. Nichols	3,891	6,938	334	112	7	4/1, 7/1	42	157.20
Queen of Angels Hospital *	Los Angeles	W. Sullivan	1,865	211	70	14	1	7/1	12-36	100.00
Santa Fe Coast Lines Hospital *	Los Angeles	.....	1,347	.....	26	11	2	7/1	12-24	175.00
White Memorial Hospital *	Los Angeles	G. Thomason	919	8,736	...	..	2	4/1	12	31.00
Highland-Alameda County Hospital *[4]	Oakland, Calif.	D. N. Richards and W. W. Crane	691	.....	85	19	2	7/1	12-36	105.00
Permanente Foundation Hospital *[4]	Oakland, Calif.	C. C. Cutting	1,962	49,827	33	14	3	4/1	12-36	125.00
Samuel Merritt Hospital	Oakland, Calif.	W. E. Mitchell	1,128	.....	14	0	1	7/1	12-24	75.00
Collis P. and Howard Huntington Memorial Hospital *	Pasadena, Calif.	.....	4,428	1,006	96	40	1	Varies	12	85.00
San Bernardino County Charity Hospital *	San Bernardino, Calif.	C. G. Hilliard	496	3,039	47	25	1	1/1	12	100.00
San Diego County General Hospital *[4]	San Diego, Calif.	C. O. Tanner	759	5,201	71	10	3	4/1	12	164.00
Children's Hospital *[4]	San Francisco	A. Kilgore	592[b]	878[b]	...	..	2	.....	12	.....
Franklin Hospital *[4]	San Francisco	T. F. Mullen	1,262	.....	22	9	4	7/1	12	100.00
French Hospital *	San Francisco	W. L. Rogers	615	1,866	21	8	1	7/1	12	200.00
Mary's Help Hospital *	San Francisco	E. Carlson	2,797	3,117	38	15	1	4/1	12	200.00
Mount Zion Hospital *[4]	San Francisco	F. I. Harris	2,047	.....	48	24	3	7/1	12	75.00
St. Luke's Hospital *[4]	San Francisco	A. Weeks	5,264	585	53	18	1	4/1	12	225.00
St. Mary's Hospital *	San Francisco	E. Butler	1,371[b]	1,169[b]	...	..	2	4/1	12	100.00
San Francisco Hospital *[4]	San Francisco	H. Brunn and L. Eloesser	1,321	.....	68	14	10	Varies	12	150.00
Southern Pacific General Hospital *	San Francisco	W. Washburn	1,317	.....	28	11	4	.....	12	250.00
Stanford University Hospitals *[4]	San Francisco	E. F. Holman	1,367	11,001	64	28	5	7/1	12-24	50.00
University of California Hospital *[4]	San Francisco	H. C. Naffziger	1,548	927	41	27	9	Varies	12	65.00
Santa Clara County Hospital *	San Jose, Calif.	C. Sullivan	.....	.....	...	..	1	.....	12	205.00
Santa Barbara Cottage Hospital *[4]	Santa Barbara, Calif.	I. Wills	674	.....	12	6	2	7/1	12	100.00
Childrens Hospital	Denver	C. Packard	547	.....	9	7	1	7/1	12-24	50.00
Colorado General Hospital *	Denver	G. B. Packard	1,090	5,243	84	57	2	1/1	12	.....
St. Luke's Hospital *	Denver	W. W. Haggart	.....	.....	...	..	2	7/1	12-36	50.00
Corwin Hospital *	Pueblo, Colo.	S. B. Potter	509	9,118	37	18	1	.....	12	.....
Bridgeport Hospital *	Bridgeport, Conn.	.....	3,487	.....	74	32	1	Varies	12	100.00
Hartford Hospital *	Hartford, Conn.	T. W. Worthen	4,432	.....	124	31	3	7/1	12-48	60.00
St. Francis Hospital *	Hartford, Conn.	.....	9,118	2,847	38	4	2	12/1	12	100.00
Grace-New Haven Community Hospital, Grace Unit *	New Haven, Conn.	R. W. Nichols	1,379	521	53	13	4	Varies	12-36	40.00
New Haven Unit *[4]	New Haven, Conn.	S. Harvey	2,354	9,508	...	..	9	4/1	12	*

Numerical and other references will be found on page 1354.

20. SURGERY—Continued

Name of Hospital	Location	Chief of Service	Inpatients Treated *	Outpatient Visits	Deaths	Autopsies	Asst., Res. and Residencies *	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Hospital of St. Raphael *	New Haven, Conn.	W. F. Verdi	4,466	.....	153	43	3	4/1	12-36	$ 75.00
Lawrence and Memorial Associated Hospitals *	New London, Conn.	G. P. Cheney	608	.....	30	7	1	.....	12	150.00
Delaware Hospital *	Wilmington, Del.	L. J. Jones	1,849	1,488	66	25	1	7/1	12-24	125.00
Memorial Hospital *	Wilmington, Del.	J. G. Spackman	1,114	1,293	30	14	3	.....	12	.....
Central Dispensary and Emergency Hosp.*†	Washington, D. C.	J. F. Mitchell	3,520	673	72	34	7	4/1	12-15	50.00
Freedmen's Hospital *†	Washington, D. C.	C. R. Drew	1,120	5,077	70	13	10	7/1	12-60	50.00
Gallinger Municipal Hospital *†	Washington, D. C.	.....	1,277	5,796	60	22	6	3/1	24-36	50.00
Garfield Memorial Hospital *†	Washington, D. C.	H. H. Kerr	3,937	887	81	50	3	4/1	12	75.00
Georgetown University Hospital *	Washington, D. C.	F. Sanderson	1,940	664	43	29	4	4/1	12-36	75.00
Providence Hospital *	Washington, D. C.	F. Sanderson	2,964	862	32	13	3	.....	12	75.00
Sibley Memorial Hospital *	Washington, D. C.	P. S. Putzki	.....	.....	...	...	3	.....	12	50.00
Duval County Hospital *	Jacksonville, Fla.	E. Jelks	574	.....	51	6	3	.....	12	125.00
Riverside Hospital †	Jacksonville, Fla.	H. A. Peyton	800	7,034	9	2	1	.....	12	.....
St. Vincent's Hospital *†	Jacksonville, Fla.	F. J. Waas	836	.....	30	4	2	7/1	12-36	150.00
James M. Jackson Memorial Hospital *	Miami, Fla.	.....	2,778	.....	99	33	3	4/1	12	83.00
Grady Memorial Hospital *	Atlanta, Ga.	D. C. Elkin	3,260	27,011	215	34	16	.....	12-36	.....
Piedmont Hospital *	Atlanta, Ga.	F. W. McRae	611	.....	8	8	2	7/1	12-36	50.00
St. Joseph's Infirmary *	Atlanta, Ga.	G. P. Huguley	2,697	733	51	11	2	6/1	12-36	100.00
University Hospital *†	Augusta, Ga.	J. H. Sherman	3,195	.....	117	12	5	7/1	12-48	25.00
Emory University Hospital *	Emory University, Ga.	L. Grove	.....	.....	35	11	2	4/1	12	50.00
American Hospital *†	Chicago	M. Thorek	1,657	.....	24	13	1	1/1, 7/1	12-36	50.00
Augustana Hospital *	Chicago	N. M. Percy	2,450	3,500	99	25	1	7/1	12	25.00
Cook County Hospital *†	Chicago	M. Davison	8,357	10,241	705	124	14	Varies	12-36	50.00
Grant Hospital *†	Chicago	E. W. Fischmann	.....	.....	...	..	2	7/1	12-36	125.00
Henrotin Hospital *	Chicago	.....	431	108	12	3	3	7/1	12-36	100.00
Illinois Masonic Hospital *†	Chicago	P. Shambaugh	820	.....	26	12	3	.....	12	.....
Lutheran Deaconess Home and Hospital *	Chicago	.....	2,424	.....	51	6	1	7/1	12	75.00
Mercy Hospital-Loyola Univ. Clinics *†	Chicago	H. A. Oberhelman	2,308	2,244	92	36	3	4/1	12	50.00
Michael Reese Hospital *†	Chicago	R. B. Bettman	2,748	3,223	72	28	6	.....	12-36	.....
Mount Sinai Hospital *†	Chicago	.....	1,730	2,005	49	18	2	4/1	12	50.00
Norwegian-American Hospital *†	Chicago	G. T. Murphy	2,411	.....	20	5	1	1/1	12	150.00
Passavant Memorial Hospital *†	Chicago	L. Davis	2,113	9,623	45	27	6	.....	12	.....
Presbyterian Hospital *	Chicago	V. C. David	2,146	2,454	40	23	3	4/1	12-36	50.00
Provident Hospital *†	Chicago	U. G. Dailey	1,177	1,022	39	5	2	7/1	12	50.00
Ravenswood Hospital *	Chicago	.....	1,240	.....	29	12	1	7/1	12-36	.....
Research and Educational Hospitals *	Chicago	W. H. Cole	832	8,445	24	20	3	.....	12-36	55.00
St. Elizabeth Hospital *	Chicago	M. G. Luken	3,610	230	29	6	1	.....	12	.....
St. Joseph Hospital *	Chicago	M. McKenna	1,976	1,691	22	7	1	4/1	12	75.00
St. Luke's Hospital *†	Chicago	E. L. Strohl	4,559	1,078	124	78	8	7/1	12-36	25.00
St. Mary of Nazareth Hospital *	Chicago	G. Mueller	.....	.....	30	9	3	7/1	12-36	125.00
U. S. Marine Hospital *	Chicago	K. E. Gamm	1,124	1,935	7	4	1	Varies	12	.....
University of Chicago Clinics *†	Chicago	D. B. Phemister	1,797	14,643	85	59	9	Varies	12-72	25.00
Wesley Memorial Hospital *†	Chicago	R. W. McNealy	2,048	.....	23	13	5	Varies	12-36	25.00
Women's and Children's Hospital *†	Chicago	P. M. Stetler	371	.....	4	3	1	.....	12	.....
Evanston Hospital *	Evanston, Ill.	F. Christopher	3,408	6,673	32	39	1	4/1	12-18	50.00
St. Francis Hospital *	Evanston, Ill.	.....	4,730	.....	116	30	1	.....	12	75.00
Little Company of Mary Hospital *	Evergreen Park, Ill.	R. J. Bennett	2,500	.....	33	5	2	12/1	12	100.00
St. Francis Hospital *†	Peoria, Ill.	W. L. Bowen	1,685	4,708	42	11	2	4/1	12-24	150.00
Indianapolis City Hospital *	Indianapolis	M. N. Hadley	1,365	6,850	85	27	5	7/1	12-36	60.00
Indiana University Medical Center *†	Indianapolis	W. D. Gatch	2,691	6,582	96	44	5	4/1	12-36	33.33
Methodist Hospital *	Indianapolis	H. S. Leonard	3,900	.....	46	11	3	7/1	12-24	180.00
Ball Memorial Hospital *†	Muncie, Ind.	W. C. Moore	2,761	.....	84	27	2	4/1	12	100.00
Iowa Methodist Hospital *	Des Moines, Iowa	J. B. Priestley	979	754	55	37	2	Varies	24-36	125.00
University Hospitals *†	Iowa City	F. Peterson	3,122	4,272	118	61	24	7/1	12	40.00
University of Kansas Hospitals *†	Kansas City, Kan.	T. G. Orr	785	3,491	25	14	4	5/1	12	50.00
St. Francis Hospital *	Wichita, Kan.	A. P. Gearhart	2,079	.....	49	8	1	7/1	12	100.00
Wesley Hospital *	Wichita, Kan.	A. L. Crittenden	1,490	.....	14	6	1	.....	12	.....
St. Joseph's Hospital *	Lexington, Ky.	.....	2,331	.....	101	25	3	4/1	12-36	90.00
Louisville General Hospital *	Louisville, Ky.	R. A. Griswold	1,463	12,017	111	24	15	4/1	12-60	45.00
Norton Memorial Infirmary *	Louisville, Ky.	R. A. Griswold	831	.....	24	9	2	7/1	12-24	100.00
St. Joseph's Infirmary *	Louisville, Ky.	I. Abell, Sr.	6,934	.....	...	..	3	.....	12	.....
Charity Hospital of Louisiana *†	New Orleans	.....	7,078	20,079	417	120	27	Varies	12-48	25.00
Hotel Dieu, Sisters' Hospital *	New Orleans	O. C. Cassegrain	2,287	.....	33	9	3	7/1	12-18	200.00
Touro Infirmary *	New Orleans	J. D. Rives	4,314	4,739	100	59	5	7/1	12	17.50
U. S. Marine Hospital *	New Orleans	O. C. Williams	2,495	7,307	29	22	2	1/1, 7/1	12-48	.....
Shreveport Charity Hospital *	Shreveport, La.	J. E. Heard	2,047	4,529	79	24	7	1/1	12-36	60.00
Maine General Hospital *	Portland, Me.	C. M. Robinson	1,994	.....	80	24	2	7/1	12-24	50.00
Baltimore City Hospitals *†	Baltimore	T. B. Aycock	1,571	2,588	116	91	10	7/1	12	40.00
Bon Secours Hospital *	Baltimore	T. B. Aycock	911	532	19	8	4	7/1	12	75.00
Church Home and Hospital *†	Baltimore	T. S. Cullen	3,350	995	49	29	4	4/1	12	45.00
Franklin Square Hospital *†	Baltimore	E. S. Johnson	2,562	.....	46	9	3	.....	12	.....
Hospital for Women *†	Baltimore	W. Riemhoff	676	1,047	15	2	3	4/1	12-15	50.00
Johns Hopkins Hospital *†	Baltimore	Blalock	2,818	40,856	128	62	10	4/1	12	.....
Maryland General Hospital *†	Baltimore	R. F. Chenowith	2,422	1,531	97	16	4	4/1	12-15	50.00
Mercy Hospital *	Baltimore	W. D. Wise	.....	.....	56	15	5	7/1	12	50.00
Provident Hospital and Free Dispensary *†	Baltimore	S. McLanahan	794	448	...	..	2	7/1	24-60	100.00
St. Agnes Hospital *†	Baltimore	L. C. Cohn	1,885	607	57	11	2	4/1	12	.....
St. Joseph's Hospital *	Baltimore	W. R. Geraghty	2,127	8,889	87	22	5	4/1	24-36	50.00
Sinai Hospital *	Baltimore	H. M. Kern	3,089	1,402	95	38	6	7/1	12	35.00
South Baltimore General Hospital *†	Baltimore	O. S. Lloyd	2,116	3,180	65	18	4	4/1	12	.....
Union Memorial Hospital *	Baltimore	J. M. T. Finney, Jr.	4,705	6,784	...	..	7	Varies	12	20.00
University Hospital *†	Baltimore	A. M. Shipley	2,928	8,908	102	26	7	4/1	15	50.00
West Baltimore General Hospital *	Baltimore	N. C. Marvel	1,156	5,655	32	9	4	7/1	12-36	70.00
Beverly Hospital *	Beverly, Mass.	P. P. Johnson	1,783	3,085	46	24	2	1/1, 6/1	24-36	50.00
Beth Israel Hospital *	Boston	C. G. Mixter	2,394	3,542	58	..	8	7/1	12-36	41.66
Boston City Hospital *†	Boston	R. C. Cochrane	11,690	61,386	512	221	9	.....	12-24	50.00
Children's Hospital *†	Boston	F. D. Ingraham	1,532	12,103	50	..	4	Varies	12	.....
Lahey Clinic	Boston	F. H. Lahey	4,000	.....	80	..	18	Varies	12-24	125.00
Massachusetts General Hospital *	Boston	E. D. Churchill and A. W. Allen	.....	.....	...	..	19	.....	12	.....
Massachusetts Memorial Hospitals *†	Boston	R. H. Smithwick	3,171	2,183	26	14	2	4/1	12	50.00
New England Hospital for Women and Children *†	Boston	G. E. Rochford	1,149	3,255	...	..	3	7/1	12	25.00
Peter Bent Brigham Hospital *	Boston	F. C. Newton	2,546	29,000	33	20	9	4/1	12	41.66
U. S. Marine Hospital *	Boston	R. L. Waugh	3,420	23,744	41	14	1	.....	12	.....
Cambridge Hospital *†	Cambridge, Mass.	H. P. Stevens	1,701	2,046	55	20	1	4/1	12-24	100.00

Numerical and other references will be found on page 1354.

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20. SURGERY—Continued

Name of Hospital	Location	Chief of Service	Inpatients Treated*	Outpatient Visits	Deaths	Autopsies	Asst., Res. and Residencies*	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Truesdale Hospital	Fall River, Mass.	W. G. Atwood	1,827	.....	21	11	2	1/1	12	.....
Newton-Wellesley Hospital**	Newton, Mass.	R. I. Smith	2,420	1,212	54	12	3	4/1	12-36	$100.00
Salem Hospital**	Salem, Mass.	W. G. Phippen	2,980	1,842	73	19	1	1/1, 7/1	12	100.00
Memorial Hospital*	Worcester, Mass.	B. H. Alton	2,677	286	41	19	1	7/1	12	125.00
Worcester City Hospital*	Worcester, Mass.	B. F. Andrews	2,164	3,780	133	24	2	4/1	12	50.00
St. Joseph's Mercy Hospital*	Ann Arbor, Mich.	H. Beebe	1,302	7,939	39	15	2	7/1	12-36	100.00
University Hospital**	Ann Arbor, Mich.	F. A. Coller	2,057	7,591	89	43	22	Varies	12	45.00
Alexander Blain Hospital*	Detroit	A. W. Blain and I. G. Downer	1,574	15,533	24	5	3	.....	12-48	200.00
Charles Godwin Jennings Hospital*	Detroit	.....	1,504[b]	.....	...	..	3	7/1	12	200.00
City of Detroit Receiving Hospital**	Detroit	C. G. Johnston	4,048	13,071	281	63	16	4/1	12-36	145.58
Grace Hospital*	Detroit	C. S. Kennedy	2,561	1,373	64	24	6	4/1	12-36	125.00
Harper Hospital**	Detroit	A. D. McAlpine	8,734	.....	...	..	9	.....	12	85.00
Henry Ford Hospital**	Detroit	R. D. McClure	7,860	112,220	124	58	27	4/1	12-60	175.00
Mount Carmel Mercy Hospital*	Detroit	L. J. Garlepy	3,517	.....	66	12	4	.....	12	.....
Providence Hospital*	Detroit	R. Bookmyer	6,379	.....	78	42	4	.....	12	.....
St. Mary's Hospital*	Detroit	G. K. Glasgow	4,664	1,047	75	15	3	Varies	12-36	150.00
U. S. Marine Hospital*	Detroit	M. B. Noyes	3,307	9,930	7	4	2	7/1	12-24	.....
Wayne County General Hospital and Infirmary**	Eloise, Mich.	R. V. Walker	3,109	6,912	220	61	9	7/1	12	172.50
Hurley Hospital*	Flint, Mich.	.....	1,865	.....	46	14	3	7/1	12	.....
Blodgett Memorial Hospital*	Grand Rapids, Mich.	J. T. Hodgen	999	.....	39	8	1	.....	12	175.00
Butterworth Hospital**	Grand Rapids, Mich.	D. Chandler	4,112	.....	83	32	3	.....	12-36	125.00
St. Mary's Hospital*	Grand Rapids, Mich.	S. L. Moleski	3,554	377	97	34	2	2/1	12	125.00
Highland Park General Hospital*	Highland Park, Mich.	F. C. Witter	.....	.....	...	..	1	.....	12	.....
St. Mary's Hospital*	Duluth, Minn.	F. J. Elias	1,520	.....	24	20	1	.....	12	.....
Lutheran Deaconess Home and Hospital	Minneapolis	A. G. Andersen	2,615	.....	23	11	1	1/1, 7/1	12	175.00
Minneapolis General Hospital**	Minneapolis	A. A. Zierold	1,315	5,092	150	60	7	7/1	12-36	91.50
University Hospitals**	Minneapolis	O. H. Wangensteen	1,232	7,717	87	58	10	7/1	12-36	91.50
Mayo Foundation	Rochester, Minn.	D. C. Balfour	(See page 1354)				135	.....	12	.....
Ancker Hospital*	St. Paul	A. R. Colvin	1,189	1,980	114	90	3	1/1	12-36	91.50
Charles T. Miller Hospital*	St. Paul	H. Zimmerman	2,536	2,950	...	..	2	4/1	12	.....
St. Louis County Hospital*	Clayton, Mo.	L. A. Will	1,346	22,743	94	30	4	4/1	12-24	60.00
Ellis Fischel State Cancer Hospital	Columbia, Mo.	E. D. Sugarbaker	1,561	.....	55	35	4	4/1	12-24	50.00
Kansas City General Hospital*	Kansas City, Mo.	C. J. Hunt	883	3,002	81	41	3	4/1	12-36	75.00
Research Hospital*	Kansas City, Mo.	C. J. Hunt	1,028[b]	.....	14[b]	5[b]	2	.....	12	.....
St. Joseph Hospital*	Kansas City, Mo.	.....	2,071	.....	...	..	3	.....	12	75.00
St. Luke's Hospital*	Kansas City, Mo.	C. B. Schutz	1,813	2,166	...	..	1	7/1	12	75.00
St. Mary's Hospital*	Kansas City, Mo.	J. E. Castles	2,139	.....	58	36	3	7/1	12	.....
Barnes Hospital*	St. Louis	E. A. Graham	1,673	5,705	67	50	17	7/1	12-36	25.00
De Paul Hospital*	St. Louis	H. A. Hassett	1,821	155	108	19	2	1/1, 4/1	12-24	60.00
Homer G. Phillips Hospital*	St. Louis	R. Elman	1,570	5,237	147	23	5	10/1	12	80.00
Jewish Hospital**	St. Louis	M. W. Myer	1,629	1,826	47	12	2	4/1	12-15	50.00
Missouri Baptist Hospital*	St. Louis	R. S. Kieffer	2,920	.....	...	..	2	4/1	12	70.00
St. Anthony's Hospital*	St. Louis	F. J. Tainter	2,964	.....	57	30	1	7/1	12	50.00
St. John's Hospital*	St. Louis	W. P. Glennon	2,207	307	67	19	2	4/1	12-24	45.00
St. Louis City Hospital**	St. Louis	P. Heinbecker	2,188	6,948	266	82	9	4/1	12-36	80.00
St. Luke's Hospital*	St. Louis	E. V. Mastin	2,309	.....	...	..	2	7/1	12	75.00
St. Mary's Group of Hospitals*	St. Louis	L. Rassieur	2,996	7,004	102	48	9	.....	12-36	35.00
Bishop Clarkson Memorial Hospital*	Omaha	C. H. Waters	1,298	.....	18	7	1	.....	12	150.00
Creighton Memorial St. Joseph's Hosp.**	Omaha	C. McMartin	2,369	2,306	46	18	1	7/1	12-24	100.00
Nebraska Methodist Hospital*	Omaha	C. W. McLaughlin	620	.....	18	8	1	7/1	12	50.00
University of Nebraska Hospital*	Omaha	J. J. Keegan	328	.....	28	27	1	4/1	12	50.00
Atlantic City Hospital*	Atlantic City, N. J.	H. I. Silvers	1,327	1,682	49	13	2	7/1	12-24	100.00
Cooper Hospital*	Camden, N. J.	L. E. Delbert	1,869	5,308	113	39	2	12/1	12-36	83.33
West Jersey Homeopathic Hospital*	Camden, N. J.	Hadley	1,521	4,264	88	12	1	.....	12	.....
Hackensack Hospital*	Hackensack, N. J.	G. W. Finke	2,759	1,155	65	10	1	7/1	12	50.00
Jersey City Hospital*	Jersey City, N. J.	E. Burke	2,653	18,311	136	21	6	Varies	12-36	.....
Mountainside Hospital**	Montclair, N. J.	V. B. Seidler	2,747	3,440	39	16	1	4/1	12	100.00
Burlington County Hospital*	Mount Holly, N. J.	W. E. Lee	886	1,197	34	12	1	.....	12	.....
Newark Beth Israel Hospital*	Newark, N. J.	.....	2,580	687	102	27	1	.....	12	.....
Albany Hospital**	Albany, N. Y.	J. L. Donhauser	2,436	2,642	67	32	4	4/1	12	25.00
Brooklyn Hospital**	Brooklyn	E. K. Tanner	2,223	3,025	58	13	2	4/1	12-15	85.00
Coney Island Hospital**	Brooklyn	D. A. McAteer	2,372	35,272	86	11	2	4/1	12	120.00
Cumberland Hospital*	Brooklyn	D. Wilkie	2,336	14,389	71	15	3	4/1	12-15	70.00
Greenpoint Hospital**	Brooklyn	J. Smith	1,344	5,804	59	2	2	4/1	12	120.00
Jewish Hospital**	Brooklyn	.....	2,090	6,652	88	18	4	8/1	12-48	25.00
Kings County Hospital*	Brooklyn	R. Barber and J. Tenopyr	7,422	31,562	551	82	6	7/1	12-36	25.00
Long Island College Hospital**	Brooklyn	E. Goetsch	2,355	9,024	39	4	4	7/1	12-72	25.00
Norwegian Lutheran Deaconesses' Home and Hospital**	Brooklyn	R. W. Tate and D. Livingstone	1,625[b]	1,135[b]	...	..	1	.....	12	.....
St. John's Hospital**	Brooklyn	M. N. Foote	1,750	4,473	...	..	3	3/1	12-36	50.00
St. Mary's Hospital**	Brooklyn	T. M. Brennan	1,293	2,941	39	4	1	4/1	12	60.00
Buffalo General Hospital*	Buffalo	W. L. Machemer	3,415	528	122	49	5	4/1	12-36	25.00
Children's Hospital	Buffalo	.....	494	878	198	137	1	10/1	12	25.00
Deaconess Hospital*	Buffalo	.....	4,299	1,647	95	33	1	7/1	12	125.00
Edward J. Meyer Memorial Hospital**	Buffalo	J. D. Stewart	1,447	2,597	118	41	7	Varies	12-60	50.00
Millard Fillmore Hospital*	Buffalo	P. Buckley	2,735	.....	44	18	2	4/1	12-48	50.00
Clifton Springs Sanitarium and Clinic	Clifton Springs, N. Y.	A. S. Taylor	1,181	.....	21	15	2	4/1	12-36	50.00
Mary Imogene Bassett Hospital*	Cooperstown, N. Y.	M. A. Melver	.....	.....	...	..	1	10/1	12	.....
Meadowbrook Hospital*	Hempstead, N. Y.	A. S. Warinner	873	.....	59	37	2	4/1	12	115.00
Mary Immaculate Hospital*	Jamaica, N. Y.	J. M. Scannell, F. X. Dealy & H. W. Draffen	.....	.....	...	..	1	3/1	12-24	110.00
Queens General Hospital**	Jamaica, N. Y.	F. N. Dealy	2,335	8,219	200	107	2	.....	12	70.00
Charles S. Wilson Memorial Hospital**	Johnson City, N. Y.	F. G. Moore	3,544	.....	36	11	2	7/1	12	200.00
New Rochelle Hospital*	New Rochelle, N. Y.	G. C. Adie	2,297	1,701	59	27	2	3/1	12	125.00
Bellevue Hospital, Div. I—Columbia U.**	New York City	C. J. MacGuire	2,576[b]	12,232[b]	96[b]	37[b]	1	Varies	12	100.00
Bellevue Hospital, Div. II—Cornell U.**	New York City	Dudley	2,576[b]	11,784[b]	96[b]	36[b]	1	Varies	12	100.00
Bellevue Hospital, Div. III—N. Y. U.**	New York City	Arthur Wright	2,844[b]	2,628[b]	123[b]	40[b]	4	Varies	12	25.00
Bellevue Hospital, Div. IV—Open Div.**	New York City	A. McQuillan	2,357[b]	10,445[b]	90[b]	32[b]	3	Varies	12	25.00
Beth Israel Hospital*	New York City	.....	1,204	2,968	58	17	3	.....	12-48	50.00
Bronx Hospital**	New York City	S. Cohn	2,222	2,626	55	11	6	4/1	12-36	75.00
Flower and Fifth Avenue Hospitals**	New York City	L. R. Kaufman	2,150	6,390	46	..	6	7/1	12	50.00
Fordham Hospital**	New York City	E. R. Cunniffe	.....	.....	...	..	4	4/1	12	70.00
Gouverneur Hospital**	New York City	J. Girsdansky	567	9,448	55	8	2	4/1	12	70.00
Harlem Hospital**	New York City	.....	.....	.....	...	..	4	1/1, 4/1	12	50.00

Numerical and other references will be found on page 1354.

20. SURGERY—Continued

Name of Hospital	Location	Chief of Service	Inpatients Treated[a]	Outpatient Visits	Deaths	Autopsies	Asst. Res. and Residencies[a]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Hospital for Special Surgery	New York City	C. G. Burdick	1,607	2,560	18	8	4	.....	12	$ 50.00
Knickerbocker Hospital *	New York City	J. V. Bohrer	963[b]	8,184[b]	...	..	1	4/1	12	150.00
Lenox Hill Hospital *[4]	New York City		2,185	5,400	61	23	4	Varies	12-24	50.00
Metropolitan Hospital *[4]	New York City	L. A. Kaufman	1,216	6,840	122	16	2	4/1	12	100.00
Montefiore Hosp. for Chronic Diseases *[4]	New York City		160	.....	35	23	4	1/1, 7/1	12	50.00
Morrisania City Hospital *[4]	New York City	G. E. Milani and P. Daly	1,359	3,607	82	33	3	4/1	12-15	50.00
Mount Sinai Hospital *[4]	New York City		.....	.....	...	..	12	1/1, 7/1	12-24	50.00
New York City Hospital *[4]	New York City	F. W. Bancroft	1,598	7,036	171	44	2	7/1	12	50.00
New York Hospital *[4]	New York City	G. J. Heuer	2,842	55,801	54	44	28	4/1	12-84	25.00
New York Infirmary for Women and Children *[4]	New York City	A. Hubert	449	1,977	7	5	2	9/1	12	75.00
New York Polyclinic Medical School and Hospital *	New York City		2,428	4,293	88	6	8	4/1	12	25.00
New York Post-Graduate Medical School and Hospital *	New York City	T. H. Russell	2,906	8,836	109	41	20	1/1, 7/1	12-36	30.00
Presbyterian Hospital *[4]	New York City	A. O. Whipple	3,720	60,301	127	..	22	.....	12	50.00
Roosevelt Hospital *	New York City	W. C. White and H. W. Cave	3,353	7,650	146	39	6	.....	12-36	70.00
St. Clare's Hospital *	New York City	W. V. Healey	3,820	2,470	38	18	3	7/1	36	25.00
St. Luke's Hospital *	New York City	W. F. MacFee	2,094	10,835	91	30	10	7/1	12-60	50.00
St. Vincent's Hospital *[4]	New York City	G. R. Stuart and R. P. Sullivan	5,415	11,950	246	111	6	4/1	12-36	50.00
Genesee Hospital *	Rochester, N. Y.	J. S. Houck	2,294	.....	65	15	2	7/1	12	.....
Highland Hospital *[4]	Rochester, N. Y.	W. A. Calihan	884	.....	...	..	3	7/1	12-36	.....
Rochester General Hospital *[4]	Rochester, N. Y.	H. L. Prince	3,494	3,402	68	39	4	7/1	12-36	60.00
St. Mary's Hospital *[4]	Rochester, N. Y.	L. F. Simpson	4,155	3,503	36	18	1	4/1	12	.....
Strong Memorial and Rochester Municipal Hospitals *[4]	Rochester, N. Y.	J. J. Morton	2,444	11,626	137	87	11	Varies	12-48	41.66
Hospital of the Good Shepherd *	Syracuse, N. Y.	A. B. Raffi	.....	.....	...	..	3	.....	12	.....
Grasslands Hospital *[4]	Valhalla, N. Y.	G. C. Adie	342	466	46	25	3	7/1	12-24	75.00
Charlotte Memorial Hospital *[4]	Charlotte, N. C.	T. D. Sparrow	1,071	3,460	20	11	6	Varies	12-36	.....
Duke Hospital *[4]	Durham, N. C.	D. Hart	2,528	13,845	54	25	12	1/1	12	83.33
Watts Hospital *	Durham, N. C.	H. Sweany	2,318	6,041	34	9	4	4/1	12-15	75.00
Rutherford Hospital	Rutherfordton, N. C.	R. H. Crawford	707	6,278	17	2	1	.....	12	.....
City Hospital *	Winston-Salem, N. C.	H. H. Bradshaw	4,634	5,802	112	23	6	.....	12	75.00
North Carolina Baptist Hospital *[4]	Winston-Salem, N. C.	H. H. Bradshaw	1,034	2,647	28	16	5	7/1	12	41.66
Trinity Hospital *	Minot, N. D.	A. L. Cameron	.....	.....	...	..	1	.....	12	.....
Children's Hospital	Akron, O.		760	.....	13	3	1	2/1	12-24	125.00
City Hospital *	Akron, O.		4,146	.....	140	40	6	4/1	12	100.00
Peoples Hospital *	Akron, O.	J. D. Smith	1,284	.....	34	14	2	7/1	12	250.00
St. Thomas Hospital *	Akron, O.	H. H. Musser	1,335	.....	25	5	3	7/1	12	125.00
Aultman Hospital *	Canton, O.		1,508	.....	45	15	3	7/1	12-36	100.00
Mercy Hospital *	Canton, O.	A. W. Warren	4,041	.....	228	13	3	4/1	12	125.00
Christ Hospital *	Cincinnati	P. W. Sutton	2,101	2,567	82	31	2	4/1	12-36	75.00
Cincinnati General Hospital *	Cincinnati	M. M. Zinninger	4,437	17,273	261	92	19	4/1	12-72	.....
Deaconess Hospital *[4]	Cincinnati	W. R. Griess, R. W. Good and D. Earley	2,652	.....	43	17	1	4/1	12	125.00
Good Samaritan Hospital *	Cincinnati	J. L. DeCourcy	7,140	917	108	..	4	7/1	12	165.00
Jewish Hospital *	Cincinnati	J. R. Ransohoff	3,659	.....	33	6	5	4/1	12-48	.....
City Hospital *[4]	Cleveland	C. H. Lenhart	1,923	11,282	127	71	21	7/1	12	50.00
Cleveland Clinic Foundation Hospital *	Cleveland	T. E. Jones	2,530	18,984	58	19	12	1/1, 7/1	12-36	100.00
Fairview Park Hospital *	Cleveland	H. W. Masenhimer	1,094	650	27	5	2*	4/1, 6/1	12	75.00
Lutheran Hospital *[4]	Cleveland	F. S. Gibson	1,160	.....	49	18	2	7/1	12	100.00
Mount Sinai Hospital *[4]	Cleveland	A. Strauss	1,763	831	58	23	2	4/1	12	100.00
St. Alexis Hospital *	Cleveland	F. A. Spittler	5,560	2,598	92	23	6	4/1	12-36	75.00
St. John's Hospital *[4]	Cleveland	F. T. Gallagher	2,005	.....	31	9	3	4/1	12	100.00
St. Luke's Hospital *	Cleveland	D. M. Glover and T. A. Willis	3,228	5,051	100	38	4	4/1	12-48	50.00
St. Vincent Charity Hospital *	Cleveland	E. P. Neary	5,414	4,775	...	..	12	.....	12	75.00
University Hospitals *[4]	Cleveland	C. H. Lenhart	.....	.....	...	..	16	4/1	12	24.96
Mount Carmel Hospital *	Columbus, O.	W. H. Teachnor	2,761	250	44	15	3	7/1	12-36	50.00
St. Francis Hospital *	Columbus, O.	I. B. Harris	.....	.....	90	19	2	.....	12	.....
Starling-Loving University Hospital *[4]	Columbus, O.	V. A. Dodd	1,624	3,486	106	57	12	4/1	12-18	50.00
Miami Valley Hospital *	Dayton, O.	E. R. Arn	2,763	921	70	21	2	.....	12	.....
Huron Road Hospital *[4]	East Cleveland, O.	L. L. Chandler	2,646	382	63	27	3	7/1	12-36	80.00
Maumee Valley Hospital *	Toledo, O.	E. J. McCormick	946	2,138	130	25	1	.....	12	.....
Mercy Hospital *	Toledo, O.	T. F. Heatley	4,301	.....	56	5	1	.....	12	.....
St. Vincent's Hospital *[4]	Toledo, O.	F. M. Douglass	4,896	5,118	102	21	3	4/1	12	.....
St. Elizabeth's Hospital *[4]	Youngstown, O.	J. M. Ranz	1,539	279	29	8	2	4/1	12-24	165.00
St. Anthony Hospital *	Oklahoma City	R. M. Howard	2,649	.....	...	..	2	.....	12	.....
University Hospitals *	Oklahoma City	C. E. Clymer	1,199	4,069	75	31	2	4/1	12-18	75.00
Emanuel Hospital *	Portland, Ore.	C. M. Nisbet	1,493	8,272	17	13	1	Varies	12	100.00
Good Samaritan Hospital *	Portland, Ore.	M. McKirdie	3,705	.....	71	42	1	4/1	12	75.00
University of Oregon Medical School Hospitals and Clinics *[4]	Portland, Ore.	T. M. Joyce	1,010	4,295	62	29	4	Varies	12-36	75.00
Abington Memorial Hospital *	Abington, Pa.	D. B. Pfeiffer	2,568	1,999	87	37	2	4/1	12-24	50.00
Allentown Hospital *[4]	Allentown, Pa.		2,503	3,144	68	26	2	6/1	12-24	75.00
Sacred Heart Hospital *	Allentown, Pa.	W. A. Hausman Jr.	3,388	8,680	126	36	2	7/1	12-36	200.00
St. Luke's Hospital *[4]	Bethlehem, Pa.	W. L. Estes Jr.	2,532	173	106	43	2	4/1, 7/1	12-24	100.00
Bryn Mawr Hospital *	Bryn Mawr, Pa.	A. E. Billings, J. S. Rodman and W. E. Lee	425	.....	33	13	2	4/1	12	125.00
George F. Geisinger Memorial Hospital *[4]	Danville, Pa.	H. L. Foss	1,764	14,338	55	14	3	4/1	12-24	75.00
St. Joseph's Hospital *	Lancaster, Pa.	J. L. Atlee Jr.	1,619	4,163	56	12	3	.....	12-36	100.00
Germantown Dispensary and Hospital *	Philadelphia	W. B. Swartley	2,752	18,273	81	21	2	7/1	12-24	50.00
Graduate Hospital of the University of Pennsylvania *	Philadelphia	W. E. Lee and W. Bates	917	10,656	37	10	2	7/1	12-24	.....
Hahnemann Hospital *[4]	Philadelphia	W. L. Martin	4,139	11,438	161	47	2	4/1	12-24	50.00
Hospital of the Protestant Episcopal Church *[4]	Philadelphia	E. T. Crossan and I. N. Boykin	2,716	12,064	107	41	2	4/1	12	50.00
Hosp. of the Univ. of Pennsylvania *[4]	Philadelphia	I. S. Ravdin	3,318	6,217	49	30	7	4/1	12-60	100.00
Hospital of the Woman's Medical College of Pennsylvania *[4]	Philadelphia	J. S. Rodman	886	4,359	22	10	1	7/1	12	.....
Jefferson Medical College Hospital *	Philadelphia	T. A. Shallow and G. P. Muller	3,441	14,728	...	..	3	Varies	12	.....
Jewish Hospital *[4]	Philadelphia		3,448	.....	105	48	2	4/1	12	75.00
Lankenau Hospital *	Philadelphia	G. C. Engel and J. M. Deaver	1,062	6,425	38	21	2	7/1	12-36	100.00

Numerical and other references will be found on page 1354.

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20. SURGERY—Continued

Name of Hospital	Location	Chief of Service	Inpatients Treated*	Outpatient Visits	Deaths	Autopsies	Asst. Res. and Residencies*	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Mount Sinai Hospital *[4]	Philadelphia	M. Behrend and B. Lipshutz	1,399	6,958	37	21	2	4/1	12-24	$100.00
Pennsylvania Hospital *	Philadelphia	T. J. Summey and J. B. Flick	1,758	11,917	64	28	4	4/1	12-36	20.00
Philadelphia General Hospital *[3]	Philadelphia		2,624	.....	165	..	3	4/1	12-36	70.00
Presbyterian Hospital *[1]	Philadelphia	W. L. Cariss	.....	.....	...	..	1	7/1	12	50.00
Temple University Hospital *[1]	Philadelphia	W. E. Burnett	2,136	5,582	86	44	4	7/1	12-36	50.00
Woman's Hospital *[3]	Philadelphia	C. M. Smyth Jr.	967	.....	...	..	2	9/1	12-36	50.00
Allegheny General Hospital *	Pittsburgh	J. C. Burt	2,518	3,983	100	22	2	4/1	12-15	100.00
Children's Hospital [4]	Pittsburgh	W. O. Sherman and E. W. Meredith	700	1,628	10	..	5	Varies	12	75.00
Mercy Hospital *[4]	Pittsburgh	H. H. Donaldson	4,465	458	84	16	3	4/1	12-36	.....
Montefiore Hospital *	Pittsburgh	H. Frankenstein	1,205	3,043	49	13	3	4/1	12	50.00
Presbyterian Hospital *[4]	Pittsburgh	E. W. Meredith	1,080	.....	37	19	3	4/1	12-36	33.00
St. Francis Hospital *[1]	Pittsburgh		2,232	281	57	4	3	4/1	12-36	80.00
Reading Hospital *[1]	Reading, Pa.	W. A. Lobkicher	.....	.....	84	55	1	7/1	12	125.00
St. Joseph's Hospital *	Reading, Pa.	M. Gearhart	1,220	3,277	42	31	2	7/1	12	250.00
Robert Packer Hospital *	Sayre, Pa.	D. Guthrie	1,473	.....	34	15	2	7/1	12	.....
Wilkes-Barre General Hospital *[4]	Wilkes-Barre, Pa.	S. P. Mengel	2,538	1,183	105	11	2	Varies	12	200.00
York Hospital *	York, Pa.	J. F. Bacon	1,202	809	44	11	1	.....	12	.....
Rhode Island Hospital *	Providence, R. I.	E. M. Porter	3,512	3,558	135	55	6	Varies	12-36	50.00
Roper Hospital *	Charleston, S. C.	F. E. Kredel	2,468	3,071	84	38	6	7/1	12-48	50.00
Baroness Erlanger Hospital *	Chattanooga, Tenn.	A. M. Patterson	3,321	2,478	107	11	4	.....	12	90.00
Knoxville General Hospital *[2]	Knoxville, Tenn.	R. G. Waterhouse	1,338	1,039	53	16	1	Varies	12	40.00
John Gaston Hospital *	Memphis, Tenn.	J. L. McGehee	2,151	10,710	109	42	3	.....	12	
Methodist Hospital *[4]	Memphis, Tenn.		2,049	.....	31	7	2	Varies	12-24	150.00
George W. Hubbard Hospital of Meharry Medical College *	Nashville, Tenn.	M. Walker	882	3,363	42	16	3	7/1	12	75.00
Nashville General Hospital *	Nashville, Tenn.	C. Adams	1,467	12,552	67	12	4	4/1	12	.....
St. Thomas Hospital *	Nashville, Tenn.	L. W. Edwards	4,028	.....	93	40	3	7/1	12-24	125.00
Vanderbilt University Hospital *[1]	Nashville, Tenn.	B. Brooks	2,691	13,582	92	50	7	4/1	12	.....
Baylor University Hospital *[1]	Dallas, Tex.	H. W. Cochran	1,357	1,099	24	9	3	7/1	12-24	50.00
Parkland Hospital *[1]	Dallas, Tex.	L. Hudson	.....	.....	...	..	4	7/1	12	50.00
St. Paul's Hospital *	Dallas, Tex.	O. W. Gibbons	7,429	.....	74	16	4	4/1	12-36	50.00
John Sealy Hospital *[1]	Galveston, Tex.	A. O. Singleton	2,119	8,918	93	49	8	.....	12	.....
Hermann Hospital *[1]	Houston, Tex.	H. F. Poyner	1,140	1,425	51	25	3	7/1	12	.....
Jefferson Davis Hospital *[1]	Houston, Tex.	J. H. Wootters	1,760	2,217	75	8	3	7/1	12-36	50.00
Memorial Hospital	Houston, Tex.		2,480	.....	37	4	6	7/1	12-36	100.00
Methodist Hospital *	Houston, Tex.	F. K. Dornak	863	.....	5	0	1	7/1	12-36	75.00
St. Joseph's Infirmary [4]	Houston, Tex.	G. W. Waldron	8,441	17,576	227	87	3	1/1	12-36	150.00
Southern Pacific Hospital	Houston, Tex.	J. R. Gandy	569	6,117	5	3	2	.....	12-24	125.00
Scott and White Hospital *[1]	Temple, Tex.		3,139	.....	37	11	6	10/1	12	150.00
Dr. W. H. Groves Latter-Day Saints Hospital *[4]	Salt Lake City	F. F. Hatch	2,221	.....	103	43	2	7/1	12	100.00
Salt Lake County General Hospital *	Salt Lake City	P. B. Price	.....	5,485	70	37	3	7/1	12-36	50.00
Bishop De Goesbriand Hospital *	Burlington, Vt.		976	450	9	5	3	7/1	12	50.00
Mary Fletcher Hospital *	Burlington, Vt.	A. G. Mackay	1,763	1,967	41	15	2	7/1	12-24	100.00
Alexandria Hospital *	Alexandria, Va.	C. J. Fiter	857	.....	24	13	2	7/1	12-24	87.50
University of Virginia Hospital *[1]	Charlottesville, Va.	E. P. Lehman	2,235	7,372	57	28	20	1/1	12	25.00
Chesapeake and Ohio Hospital *	Clifton Forge, Va.	J. M. Emmett	2,930	4,277	29	12	3	4/1	12	60.00
DePaul Hospital *	Norfolk, Va.	R. L. Payne	1,273	451	37	16	1	7/1	12	100.00
Norfolk General Hospital *	Norfolk, Va.	L. Gwathmey	6,208	484	30	30	1	4/1	12	100.00
Johnston-Willis Hospital *	Richmond, Va.	F. S. Johns	1,942	.....	16	7	2	4/1	12	100.00
Medical College of Virginia, Hosp. Div.*	Richmond, Va.	I. A. Bigger	2,609	2,989	70	31	7	4/1	12	37.50
Jefferson Hospital *	Roanoke, Va.	H. H. Trout Sr.	2,437	3,345	68	13	3	4/1	12-24	150.00
King County Hospital *	Seattle, Wash.	R. D. Forbes	3,228[b]	1,401[b]	...	..	4	.....	12	125.00
Providence Hospital *	Seattle, Wash.	R. L. Zech	1,747	.....	19	11	3	1/1	12	100.00
Swedish Hospital *	Seattle, Wash.		871[b]	.....	...	..	1	.....	12	100.00
Virginia Mason Hospital *	Seattle, Wash.	J. W. Baker	2,700	.....	27	11	2	.....	12	100.00
Northern Permanente Foundation *	Vancouver, Wash.	E. D. Wiley	1,710	5,153	10	7	2	4/1	12	250.00
Beckley Hospital	Beckley, W. Va.	J. W. Bolen	2,090	11,766	44	7	2	1/1	12-36	100.00
Charleston General Hospital *[4]	Charleston, W. Va.	J. E. Cannaday	2,302	2,127	42	19	6	7/1	12-36	50.00
Chesapeake and Ohio Hospital *	Huntington, W. Va.	R. J. Wilkinson	.....	.....	...	..	1	.....	12	.....
St. Mary's Hospital *	Huntington, W. Va.	I. R. Harwood	3,124	.....	67	18	1	4/1	12-24	225.00
Laird Memorial Hospital	Montgomery, W. Va.	W. R. Laird	2,247	6,133	33	8	2	6/1	12-36	150.00
St. Joseph Hospital *	Parkersburg, W. Va.	T. L. Harris	552	.....	10	4	1	7/1	12-60	150.00
LaCrosse Lutheran Hospital *[1]	La Crosse, Wis.	A. H. Gundersen	947	.....	16	10	1	7/1	12	100.00
State of Wisconsin General Hospital *[4]	Madison, Wis.	E. R. Schmidt	1,548	3,070	81	59	9	7/1	12-36	25.00
Columbia Hospital *	Milwaukee	R. E. Morter	2,599	.....	49	28	1	1/1	12-48	50.00
Milwaukee Children's Hospital [1]	Milwaukee	A. A. Schaefer	(See Pediatrics)		14	10	1	4/1	12	.....
Milwaukee County Hospital *[4]	Milwaukee	J. M. King	7,718	5,499	92	18	8	4/1	12-36	68.22
Milwaukee Hospital *	Milwaukee	C. Eberbach	1,427	.....	23	9	1	.....	12	.....
Mount Sinai Hospital *	Milwaukee	D. V. Elconin	1,602	220	32	10	2	7/1	12-36	125.00
St. Joseph's Hospital *	Milwaukee	F. Stratton	5,938	.....	75	21	2	4/1	12-24	100.00
St. Luke's Hospital *[1]	Milwaukee	H. J. Gramling	946	.....	15	8	1	.....	12	.....
St. Mary's Hospital *	Milwaukee	D. Witte	.....	.....	...	..	1	.....	12	.....
Queen's Hospital *[4]	Honolulu, Hawaii	J. R. Judd	1,847	.....	34	27	4	7/1	12-24	150.00

Hospitals, 378; Assistant Residencies and Residencies, 1,602

21. THORACIC SURGERY

United States Army.—Residencies available to medical officers, U. S. Army

Fitzsimons General Hospital *.....Denver

United States Navy.—Residencies available to medical officers, U. S. Navy

U. S. Naval Hospital *.....Great Lakes, Ill. U. S. Naval Hospital.....Sampson, N. Y.

Highland-Alameda County Hospital *	Oakland, Calif.		.....	.....	...	..	1	.....	12	.....
Olive View Sanatorium [1]	Olive View, Calif.	J. Skillen	293	.....	...	..	3	.....	12	$382.00
Norwich State Tuberculosis Sanatorium (Uncas-on-Thames)	Norwich, Conn.	R. G. Urquhart	.....	260	...	..	2	7/1	12	215.00
City of Chicago Municipal Tuberculosis Hospital	Chicago	R. M. Davison	238	431[b]	...	..	2	.....	12	.....
Boston Sanatorium	Boston	H. Binney	81	.....	...	..	1	.....	12	150.00
University Hospital *[4]	Ann Arbor, Mich.	J. Alexander	426	1,799	16	10	6	.....	12	101.00
Herman Kiefer Hospital [4]	Detroit	E. J. O'Brien	736[b]	1,519[b]	...	..	4	.....	12	.....
Mississippi State Tuberculosis Sanatorium [4]	Sanatorium, Miss.	J. S. Harter	260	101	3	1	1	1/1	36	150.00
Barnes Hospital *	St. Louis	E. A. Graham	435	175	57	34	4	.....	12	.....

Numerical and other references will be found on page 1354.

21. THORACIC SURGERY—Continued

Name of Hospital	Location	Chief of Service	Inpatients Treated[a]	Outpatient Visits	Deaths	Autopsies	Asst. Res. and Residencies[a]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend ($/month)
Hudson County Tuberculosis Hospital	Jersey City, N. J.	F. Bortone	64	.....	...	..	1	.....	12	.....
Kings County Hospital *[4]	Brooklyn	H. C. Maier	258	446	26	8	1	7/1	12-24	$ 25.00
Edward J. Meyer Memorial Hospital *[3]	Buffalo	J. D. Stewart	8	.....	2	..	1	Varies	12-36	50.00
Hermann M. Biggs Memorial Hospital [4]	Ithaca, N. Y.		(See Tuberculosis)			..	2	.....	12-36	200.00
Triboro Hospital [4]	Jamaica, N. Y.	H. C. Maier and H. W. Louria	(See Tuberculosis)			..	4	.....	12	100.00
Mount Morris Tuberculosis Hospital	Mount Morris, N. Y.		34	.....	...	..	1	.....	12	.....
Bellevue Hospital, Div. I—Columbia U.*[4]	New York City	A. Lambert	160[b]	215[b]	29[b]	12[b]	4	Varies	12	83.33
Metropolitan Hospital *[4]	New York City	S. A. Thompson	62	.....	15	1	1	4/1	12	100.00
Homer Folks Tuberculosis Hospital	Oneonta, N. Y.	A. M. Skinner	154	20	2	1	2	10/1	12	208.33
Sea View Hospital [4]	Staten Island, N. Y.	L. R. Davidson	403	.....	24	..	3	1/1, 7/1	12	120.00
North Carolina Baptist Hospital *[4]	Winston-Salem, N. C.	H. H. Bradshaw	96	388	9	7	2	7/1	12	41.66
City Hospital *[4]	Cleveland		.....	.....	...	..	1	.....	12	.....
University of Oregon Medical School Hospitals and Clinics *	Portland, Ore.	W. B. Conklin	236	5,962	17	12	3	Varies	12-36	75.00
Muirdale Sanatorium	Milwaukee		(See Tuberculosis)			..	1	.....	12	.....

Hospitals, 23; Assistant Residencies and Residencies, 51

22. TRAUMATIC SURGERY

Morrisania City Hospital *[4]	New York City	T. O'Kane	2,032	6,732	87	4	2	4/1	15	$ 50.00
St. Joseph Hospital *	Memphis, Tenn.	E. J. Lipscomb	.....	.....	...	..	1	7/1	12	100.00
Charleston General Hospital *	Charleston, W. Va.	G. Miyakawa	1,056	5,321	5	2	1	7/1	12-36	50.00

23. TUBERCULOSIS

United States Army.—Residencies available to medical officers, U. S. Army

Fitzsimons General Hospital *	Denver									
Los Angeles Sanatorium [4]	Duarte, Calif.	J. Segal	340	1,149	31	19	4	1/1	12	$100.00
Arroyo-Del Valle Sanatorium [4]	Livermore, Calif.	H. G. Trimble	453	.....	60	4	2	7/1	12	105.00
Barlow Sanatorium [4]	Los Angeles	H. W. Bosworth	172	1,344	1	..	2	7/1	12	100.00
Los Angeles County Hospital *[4]	Los Angeles	C. R. Howson	1,588	1,458	482	17	3	.....	12	.....
Pottenger Sanatorium and Clinic [4]	Monrovia, Calif.	F. M. Pottenger	172	1,648	21	3	1	.....	12	.....
Bret Harte Sanatorium	Murphys, Calif.	E. P. Smart	279	2,204	..	..	2	.....	12	.....
Olive View Sanatorium [4]	Olive View, Calif.	L. Tepper	1,687	.....	51	6	14	.....	12	327.00
San Diego County General Hospital *	San Diego, Calif.	R. H. Sundberg	169	2,210	56	6	1	4/1	12	164.00
San Francisco Hospital *[4]	San Francisco	S. M. Farber	760	.....	255	37	3	.....	12	80.00
Santa Clara County Hospital *	San Jose, Calif.	G. Scarborough	258	4,154	51	3	2	7/1	12	225.00
Fairmont Hospital of Alameda County	San Leandro, Calif.	H. G. Trimble	.....	.....	...	..	2	7/1	12-36	105.00
Denver General Hospital *	Denver	B. T. McMahon	104	4,907	54	9	1	4/1	12	50.00
National Jewish Hospital [4]	Denver	C. J. Kaufman	383[b]	3,189[b]	...	..	8	1/1, 7/1	12-36	100.00
Sanatorium of the Jewish Consumptives' Relief Society	Spivak, Colo.	A. L. Briskman	302	1,576	25	8	4	Varies	12	.....
Undercliff, Meriden State Tuberculosis Sanatorium *	Meriden, Conn.	C. B. Gibson	553	2,294	85	13	2	7/1	12-24	75.00
Norwich State Tuberculosis Sanatorium (Uncas-on-Thames)	Norwich, Conn.	W. H. Weldman	715	2,967	100	20	6	7/1	12	215.00
Laurel Heights State Tuberculosis Sanatorium	Shelton, Conn.	E. J. Lynch	638	1,856	...	..	2	.....	12	.....
Gaylord Farm Sanatorium [4]	Wallingford, Conn.		320	3,000	...	..	2	.....	12	.....
Tuberculosis Sanatorium (Glenn Dale, Md. P. O.)	Washington, D. C.	D. L. Finucane	1,116	.....	162	66	9	Varies	12-60	358.33
University of Chicago Clinics *	Chicago	R. G. Bloch	.....	804	...	..	1	.....	12-24	25.00
Macon County Tuberculosis Sanatorium [4]	Decatur, Ill.	D. F. Loewen	145	5,682	9	9	1	1/1	12	100.00
Pleasant View Sanatorium	East St. Louis, Ill.	R. Bosworth	183	11,265	22	..	1	7/1	12-24	150.00
Peoria Municipal Tuberculosis Sanatorium [4]	Peoria, Ill.	M. Pollak	132	3,295	22	17	2	.....	12-36	175.00
Rockford Municipal Tuberculosis Sanatorium [4]	Rockford, Ill.	W. J. Bryan	237	3,420	18	3	1	.....	12-36	250.00
Lake County Tuberculosis Sanatorium [4]	Waukegan, Ill.	C. K. Petter	285	3,319	50	30	1	1/1, 7/1	12-24	.....
Boehne Tuberculosis Hospital [4]	Evansville, Ind.	P. Feinman	202	848	42	..	2	.....	12-24	250.00
Indianapolis City Hospital *	Indianapolis	D. J. White	212	2,129	50	8	1	.....	12	.....
Sunnyside Sanatorium [4]	Indianapolis	F. L. Jennings	451	934	38	19	2	.....	12-24	.....
State Sanatorium [4]	Oakdale, Ia.		706[b]	.....	...	..	1	.....	12	.....
Charity Hospital of Louisiana *	New Orleans, La.		888	9,414	257	27	4	Varies	12-24	100.00
Western Maine Sanatorium [4]	Greenwood Mt., Me.	L. Adams	291	387	28	8	1	.....	12	.....
Baltimore City Hospitals *[4]	Baltimore	L. M. Serra	592	.....	162	84	4	4/1	12	65.00
Boston Sanatorium	Boston	J. A. Foley	984	.....	214	..	5	.....	12	150.00
Rutland State Sanatorium [4]	Rutland, Mass.		491[b]	.....	...	..	1	.....	12	.....
Norfolk County Hospital	S. Braintree, Mass.	N. R. Pillsbury	222[b]	.....	26	2	3	.....	24	200.00
Middlesex County Sanatorium [4]	Waltham, Mass.	S. H. Remick	479	14,714	56	3	2	.....	12-24	205.00
Westfield State Sanatorium [4]	Westfield, Mass.	R. Morgan	225[b]	3,736[b]	42	5	1	.....	12-24	185.00
Belmont Hospital [4]	Worcester, Mass.	A. D. Ward	252	2,981	35	10	2	.....	12	133.00
University Hospital *[4]	Ann Arbor, Mich.	J. Barnwell	14	1,088	3	2	2	.....	12	101.00
American Legion Hospital	Battle Creek, Mich.	C. Manni	480	150	42	..	1	.....	12	.....
Herman Kiefer Hospital [4]	Detroit	P. T. Chapman	1,609	39,259	248	97	15	7/1	12	200.00
Michigan State Sanatorium [4]	Howell, Mich.	E. W. Laboe	717	1,571	80	..	6	Varies	12	287.50
Ingham Sanatorium [4]	Lansing, Mich.	C. J. Stringer	332	14,698	10	..	2	7/1	24	200.00
Morgan Heights Sanatorium	Marquette, Mich.	R. F. Berry	135	.....	14	2	1	.....	12	.....
William R. Maybury Sanatorium [4]	Northville, Mich.	H. S. Willis	1,573[b]	.....	...	..	3	.....	12	.....
Oakland County Tuberculosis Hospital [4]	Pontiac, Mich.	A. S. Kimball, Jr.	420	5,487	40	7	3	1/1	12-36	200.00
Nopeming Sanatorium [4]	Nopeming, Minn.	G. A. Hedberg	547[b]	4,007[b]	...	..	2	1/1, 4/1	12	100.00
Glen Lake Sanatorium [4]	Oak Terrace, Minn.	E. S. Mariette	485	5,440	107	33	4	.....	12	.....
Mississippi State Tuberculosis Sanatorium	Sanatorium, Miss.	H. Boswell	770	1,628	31	1	3	7/1	24	150.00
Kansas City Municipal Tuberculosis Hosp.	Kansas City, Mo.	D. L. Coffman	250[b]	.....	...	..	3	4/1	12	90.00
Robert Koch Hospital [4]	Koch, Mo.	G. D. Kettelkamp	761[b]	.....	...	..	9	.....	12	135.00
Homer G. Phillips Hospital *	St. Louis	A. Goldman	256	41	77	16	2	10/1	12	80.00
Mount St. Rose Sanatorium	St. Louis	J. L. Mudd	292	1,883[b]	33	14	1	.....	12	.....
New Jersey Sanatorium for Tuberculous Diseases	Glen Gardner, N. J.	A. J. Stolow	695	1,262	12	5	3	.....	12	.....
Hudson County Tuberculosis Hospital	Jersey City, N. J.	B. S. Pollak	942	12,039	181	..	5	.....	12	.....
Essex Mountain Sanatorium	Verona, N. J.	B. M. Harman	700	3,254	180	25	9	.....	12	200.00
Albany Hospital *[4]	Albany, N. Y.	R. J. Erickson	245	1,367	56	25	2	4/1	12	25.00
Montefiore Hospital Country Sanatorium [4]	Bedford Hills, N. Y.	M. Pinner	450	.....	...	..	4	.....	12	.....
Kings County Hospital *[4]	Brooklyn	C. E. Hamilton	978	6,962	107	3	3	7/1	12-24	100.00
Kingston Avenue Hospital	Brooklyn	F. Murray	319	540	42	13	2	4/1	12	120.00

Numerical and other references will be found on page 1354.

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23. TUBERCULOSIS—Continued

Name of Hospital	Location	Chief of Service	Inpatients Treated [a]	Outpatient Visits	Deaths	Autopsies	Asst., Res. and Residencies [a]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Edward J. Meyer Memorial Hospital [a4]	Buffalo	J. H. Donnelly	700	1,856	202	71	3	Varies	12-36	$ 50.00
Nassau County Tuberculosis Hospital	Farmingdale, N. Y.	J. C. Walsh	521	7,059	74	19	4	7/1	12-24	150.00
Herman M. Biggs Memorial Hospital [1]	Ithaca, N. Y.	N. S. Lincoln	412	5,497	39	20	3	.....	12-36	200.00
Triboro Hospital [4]	Jamaica, N. Y.	R. H. Bennett and H. M. Riggins	772	872	109	29	14	.....	12	100.00
Mount Morris Tuberculosis Hospital [4]	Mount Morris, N. Y.	A. M. Stokes	267	5,085	38	15	3	.....	12	.....
Bellevue Hospital, Div. I—Columbia U. [a4]	New York City	J. B. Amberson	2,840[b]	9,914[b]	245[b]	116[b]	13	Varies	12	83.33
Lenox Hill Hospital [a4]	New York City	G. Thorburn	100	2,182	4	4	1	1/1	12	50.00
Metropolitan Hospital [a4]	New York City	G. G. Ornstein	513	4,908	250	7	7	4/1	12	100.00
Montefiore Hospital for Chronic Diseases [a4]	New York City	.....	368	.....	84	38	4	1/1, 7/1	12	50.00
St. Joseph Hospital for Chest Diseases	New York City	F. J. McCarthy	718	.....	117	15	3	Varies	12	150.00
Homer Folks Tuberculosis Hospital [4]	Oneonta, N. Y.	R. Horton	365	6,406	31	14	4	10/1	12	208.33
Municipal Sanatorium [4]	Otisville, N. Y.	J. S. Edlin	1,132	.....	...	..	7	.....	12	.....
New York State Hospital	Ray Brook, N. Y.	H. A. Bray	673	4,779	36	16	4	.....	12	.....
Iola-Monroe County Tuberculosis Sanat. [4]	Rochester, N. Y.	E. Bridge	686	19,610	96	33	7	7/1	12-24	200.00
Schenectady County Tuberculosis Hospital [4]	Schenectady, N. Y.	J. M. Blake	164	2,471	31	2	2	.....	12	100.00
Sea View Hospital [4]	Staten Island, N. Y.	G. G. Ornstein	2,987	.....	591	28	21	1/1, 7/1	12	120.00
Trudeau Sanatorium [4]	Trudeau, N. Y.	F. H. Heise	430	.....	...	..	5	Varies	12	25.00
Grasslands Hospital [a4]	Valhalla, N. Y.	W. G. Childress	418	1,861	68	29	8	4/1	12	117.50
Jefferson County Sanatorium [4]	Watertown, N. Y.	S. E. Simpson	106	2,165	23	14	1	7/1	12-36	100.00
Dunham Hospital [4]	Cincinnati	J. H. Skavlem	885	2,088	178	37	6	.....	12	.....
City Hospital [a4]	Cleveland	R. C. McKay	710	.....	304	55	4	7/1	12	75.00
Franklin County Tuberculosis Hospital [4]	Columbus, O.	W. L. Potts	622[b]	.....	97	53	5	.....	12	.....
Sunny Acres, Cuyahoga County Tuberculosis Hospital [4]	Warrensville, O.	R. H. Browning	689	25,374	37	14	6	4/1	12	225.00
Eagleville Sanatorium for Consumptives	Eagleville, Pa.	A. J. Cohen	399[b]	6,778[b]	...	..	2	.....	12	.....
Germantown Dispensary and Hospital [a]	Philadelphia	F. M. McPhedran	.....	.....	...	..	1	7/1	12-24	50.00
White Haven Sanatorium [4]	White Haven, Pa.	L. J. Leavens	225	96	56	1	2	1/1	12-24	50.00
State Sanatorium [4]	Wallum Lake, R. I.	U. E. Zambarano	759	5,214	128	22	2	.....	12	.....
Pine Breeze Sanatorium	Chattanooga, Tenn.	W. D. Rosborough and A. S. Easley	572[b]	.....	...	..	2	.....	12	.....
Davidson County Tuberculosis Hospital	Nashville, Tenn.	R. R. Crowe	496	7,153	54	13	3	3/1	12-24	150.00
Woodmen of the World Mem. Hospital	San Antonio, Tex.	R. G. McCorkle	189	.....	14	4	1	9/1	12	.....
King County Tuberculosis Hospital [4]	Seattle, Wash.	P. H. Narodick	345	3,028	46	..	1	7/1	12-36	300.00
Hopemont Sanitarium [4]	Hopemont, W. Va.	D. Salkin	925	2,100	71	29	4	.....	12-36	175.00
Muirdale Sanatorium [4]	Milwaukee	A. V. Cadden	1,022	1,142	152	21	4	.....	12-24	.....
Wisconsin State Sanatorium [4]	Statesan, Wis.	R. H. Schmidt, Jr.	257	.....	11	5	3	Varies	12	200.00
†Leahi Hospital	Honolulu, Hawaii	N. H. Walker	415	2,367	113	32	6	Varies	12-24	200.00

Hospitals, 96; Assistant Residencies and Residencies, 357

24. UROLOGY

United States Navy.—Residencies available to medical officers, U. S. Navy

†U. S. Naval Hospital *.....Bethesda, Md.
†U. S. Naval Hospital *.....St. Albans, N. Y.
†U. S. Naval Hospital *.....Philadelphia
†U. S. Naval Hospital *.....Portsmouth, Va.

Jefferson and Hillman Hospitals *	Birmingham, Ala.	W. F. Scott	595	16,356	40	10	2	7/1	12-36	$ 50.00
†California Hospital *	Los Angeles	G. J. Thomas	692	.....	18	6	1	.....	12	.....
Los Angeles County Hospital *[1]	Los Angeles	G. F. Schenck	1,887	7,236	205	61	5	4/1, 7/1	36	157.20
White Memorial Hospital *[1]	Los Angeles	R. W. Barnes	566	5,574	...	..	1	4/1	12	31.00
Franklin Hospital *	San Francisco	F. Hinman	634	.....	20	5	4	7/1	12	200.00
San Francisco Hospital [a1]	San Francisco	.....	408	.....	27	4	1	.....	12	150.00
Stanford University Hospitals [a1]	San Francisco	J. R. Dillon	505	3,808	16	6	2	7/1	12-24	150.00
University of California Hospitals [a1]	San Francisco	F. Hinman	458	486	7	4	1	Varies	12	65.00
†Colorado General Hospital *	Denver	J. A. Philpotts	256	1,086	26	17	1	7/1	12	50.00
Grace-New Haven Community Hospital New Haven Unit [a4]	New Haven, Conn.	C. Deming	516	2,061	...	..	2	4/1	12	*
Gallinger Municipal Hospital [a1]	Washington, D. C.	.....	364	1,694	30	18	2	3/1	12	50.00
St. Vincent's Hospital *	Jacksonville, Fla.	R. R. McIver	381	.....	44	9	1	.....	12	125.00
Grady Memorial Hospital *[15]	Atlanta, Ga.	E. Floyd	667	4,234	44	3	4	.....	12	.....
University Hospital *	Augusta, Ga.	J. R. Rinker	316	559	22	4	1	7/1	12	50.00
†Alexian Brothers Hospital *	Chicago	E. F. Hess	333	.....	279	75	1	Varies	12-36	100.00
Cook County Hospital *	Chicago	J. Culver	1,377	2,250	245	24	2	7/1	12-24	25.00
Michael Reese Hospital [a1]	Chicago	H. Rolnick	311	1,374	8	3	2	.....	12-36	.....
Presbyterian Hospital *	Chicago	H. L. Kretschmer	1,035	1,936	28	14	2	4/1	12-36	50.00
St. Luke's Hospital *	Chicago	H. Culver	614	1,370	23	7	3	7/1	12-36	25.00
University of Chicago Clinics *	Chicago	C. B. Huggins	280	6,438	15	11	2	.....	12-24	25.00
Wesley Memorial Hospital [a1]	Chicago	V. J. O'Conor	735	.....	13	5	2	1/1, 4/1 7/1, 10/1	12-36	25.00
†St. Francis Hospital [a1]	Peoria, Ill.	A. Sprenger	720	.....	34	7	1	4/1	12-36	150.00
Indianapolis City Hospital *	Indianapolis	R. L. Smith	322	1,335	42	12	2	.....	12-24	.....
†Methodist Hospital *	Indianapolis	E. F. Rupel	1,186	.....	45	14	1	.....	12-36	180.00
University Hospitals [a1]	Iowa City	N. G. Alcock	1,686	1,129	76	17	6	7/1	12	25.00
†University of Kansas Hospitals [a1]	Kansas City, Kan.	N. F. Ockerblad	386	656	24	11	1	7/1	24-36	50.00
Charity Hospital of Louisiana *	New Orleans, La.	.....	2,025	10,359	94	21	9	Varies	12-36	25.00
Touro Infirmary *	New Orleans, La.	W. A. Reed	720	2,164	25	9	1	.....	12	.....
Johns Hopkins Hospital *	Baltimore	J. A. C. Colston	1,065	4,132	21	11	4	4/1	12	.....
Beth Israel Hospital *	Boston	E. G. Crabtree	345	1,648	15	..	1	4/1	12	79.16
Boston City Hospital [a1]	Boston	H. H. Howard	538	2,228	51	6	2	.....	12	50.00
Lahey Clinic	Boston	E. E. Ewert	550	9,600	10	6	4	Varies	12-36	125.00
Massachusetts General Hospital *	Boston	G. G. Smith	.....	.....	...	..	3	.....	12	.....
Massachusetts Memorial Hospitals *	Boston	S. N. Vose	.....	1,004	11	4	1	4/1	12	50.00
Peter Bent Brigham Hospital *	Boston	J. H. Harrison	350	3,000	9	8	2	.....	24	.....
University Hospital [a4]	Ann Arbor, Mich.	R. M. Nesbit	1,214	4,734	23	10	6	.....	12	101.00
City of Detroit Receiving Hospital [a1]	Detroit	W. E. Keane and E. G. Martin	897	3,036	83	25	2	4/1	12-18	145.57
Grace Hospital *	Detroit	H. W. Fingremeyer	958	314	30	7	1	4/1	12-36	125.00
Harper Hospital [a1]	Detroit	F. H. Cole	.....	.....	...	..	1	.....	12	85.00
Henry Ford Hospital [a1]	Detroit	J. K. Ormond	335	11,989	20	10	3	4/1	12-36	175.00
Wayne County General Hospital and Infirmary [a1]	Eloise, Mich.	W. L. Sherman	609	2,070	74	22	4	7/1	12	172.50
Minneapolis General Hospital [a1]	Minneapolis	T. H. Sweetser	300	1,221	39	12	1	1/1, 7/1	12-36	91.50
†St. Mary's Hospital *	Minneapolis	T. H. Sweetser	.....	.....	...	..	1	.....	12	.....
University Hospitals [a1]	Minneapolis	C. D. Creevy	617	1,839	31	23	2	7/1	36	91.50
Mayo Foundation	Rochester, Minn.	W. F. Braasch and S. J. Thompson	(See page 1354)				12	.....	12	.....

24. UROLOGY—Continued

Name of Hospital	Location	Chief of Service	Inpatients Treated[5]	Outpatient Visits	Deaths	Autopsies	Asst. Res. and Residencies[8]	Beginning of Service (1946)	Length of Service (Months)	Beginning Stipend (Month)
Anoker Hospital *	St. Paul	F. E. B. Foley	275	1,112	31	22	1	7/1	12	$ 91.50
Charles T. Miller Hospital *	St. Paul	F. E. B. Foley	680	5,931	...	..	1	.....	12	.....
Kansas City General Hospital *	Kansas City, Mo.	R. L. Hoffman	348	820	22	12	1	.....	12-36	75.00
Research Hospital *	Kansas City, Mo.	R. L. Hoffman	448	.....	8	3	1	.....	12-36	100.00
Homer G. Phillips Hospital *[4]	St. Louis	R. Deakins	718	1,648	28	3	2	10/1	12	80.00
St. Louis City Hospital *[4]	St. Louis	G. Carroll	469	1,350	56	24	2	4/1	12-36	80.00
St. Mary's Group of Hospitals *	St. Louis	C. E. Burford	567	2,068	20	8	3	.....	36	35.00
Atlantic City Hospital *	Atlantic City, N. J.	C. H. de T. Shivers	342	6,510	2	..	1	7/1	12-24	.....
Bayonne Hospital and Dispensary *	Bayonne, N. J.	S. R. Woodruff	648	230	7	3	3	7/1	12	.....
Jersey City Hospital *	Jersey City, N. J.	E. J. Daly	366	2,649	30	8	4	.....	12	.....
Newark City Hospital *	Newark, N. J.	C. R. O'Crowley	.....	.....	...	..	1	.....	12	.....
Albany Hospital *[4]	Albany, N. Y.	J. E. Heslin	910	926	30	17	3	4/1	12	25.00
Kings County Hospital *	Brooklyn	F. L. Senger	1,560	2,244	207	12	2	7/1	12-24	25.00
Long Island College Hospital *	Brooklyn	F. L. Senger	631	2,053	24	7	2	7/1	24	25.00
Buffalo General Hospital *	Buffalo	O. J. Oberkircher	484	697	21	3	1	4/1	12-36	25.00
Edward J. Meyer Memorial Hospital *[4]	Buffalo	E. M. Watson	360	1,308	45	8	3	Varies	12-36	50.00
†Millard Fillmore Hospital *	Buffalo	G. E. Slotkin	765	.....	24	8	1	4/1	12-48	50.00
Queens General Hospital *[4]	Jamaica, N. Y.	F. G. Riley	729	5,437	85	44	2	.....	12	70.00
Bellevue Hospital, Div. II—Cornell U.*[4]	New York City	H. S. Jeck	1,144[9]	8,774[b]	88[b]	12[b]	5	Varies	12	25.00
†Beth Israel Hospital *[4]	New York City	S. F. Wilhelm	535	1,710	28	9	1	4/1	12-48	50.00
Metropolitan Hospital *[4]	New York City	S. Carleton	274	3,171	40	12	1	10/22	12	100.00
Morrisania City Hospital *[4]	New York City	J. Duff	580	1,434	29	7	4	1/1	15	50.00
New York City Hospital *	New York City	T. J. Kirwin	158	1,990	26	5	1	7/1	12	100.00
New York Hospital *[4]	New York City	A. Stevens and O. Lowsley	847	11,701	31	8	9	4/1	12-60	25.00
New York Polyclinic Medical School and Hospital *	New York City	.....	522	1,551	22	3	1	4/1	12	25.00
New York Post-Graduate Medical School and Hospital *	New York City	C. G. Bandler	459	3,367	10	2	4	7/1	12-24	30.00
Presbyterian Hospital *[4]	New York City	G. Cahill	1,282	8,382	59	..	6	.....	12	20.83
Roosevelt Hospital *	New York City	S. A. Belsler	560	1,879	22	5	2	.....	12-24	86.66
St. Luke's Hospital *	New York City	G. F. Hoch	518	2,341	20	5	1	7/1	12-36	50.00
Strong Memorial-Rochester Municipal Hospitals *[4]	Rochester, N. Y.	W. W. Scott	712	7,084	...	..	4	7/1	12-48	41.66
Sea View Hospital [4]	Staten Island, N. Y.	A. J. Greenberger	110	.....	9	..	1	1/1, 7/1	12	120.00
Charlotte Memorial Hospital *[4]	Charlotte, N. C.	W. E. Daniel	1,105	78	20	12	1	.....	12-36	75.00
Duke Hospital *[4]	Durham, N. C.	E. P. Alyea	363	8,036	11	4	6	4/1	12	83.33
Watts Hospital *	Durham, N. C.	W. M. Coppridge	403	94	...	..	1	4/1	15	100.00
North Carolina Baptist Hospital *[4]	Winston-Salem, N. C.	F. K. Garvey	517	552	14	1	2	7/1	12	41.66
City Hospital *[4]	Cleveland	H. Trattner	446	2,314	28	11	2	7/1	12	75.00
Cleveland Clinic Foundation Hospital	Cleveland	W. E. Lower	963	16,322	44	11	6	1/1, 7/1	12-36	100.00
University Hospitals *[4]	Cleveland	J. J. Joelson	.....	.....	...	..	1	4/1	12	75.66
Starling-Loving University Hospital *[4]	Columbus, O.	W. N. J. Taylor	505	672	27	8	3	4/1	6-18	50.00
St. Vincent's Hospital *[4]	Toledo, O.	L. P. Dolan	636	39	28	4	1	.....	12	.....
†University Hospitals *	Oklahoma City	B. A. Hayes	259	1,908	29	7	2	.....	18	35.00
University of Oregon Medical School Hospitals and Clinics *[4]	Portland, Ore.	J. R. Hand and J. G. Strohm	243	1,388	22	9	3	Varies	12-36	75.00
†Allentown Hospital *	Allentown, Pa.	W. C. Masonheimer	388	253	18	4	1	7/1	12-24	75.00
St. Vincent's Hospital *	Erie, Pa.	E. Hess	571	.....	28	10	1	.....	12	.....
George F. Geisinger Memorial Hospital *	Danville, Pa.	W. I. Buchert	506	5,695	21	6	1	4/1	12	75.00
Graduate Hospital of the University of Pennsylvania *	Philadelphia	J. C. Birdsall	155	1,982	13	7	1	7/1	12-24	.....
Hosp. of the University of Pennsylvania *	Philadelphia	P. B. Hughes	576	2,326	16	7	1	9/1	12-24	100.00
Jefferson Medical College Hospital *	Philadelphia	D. M. Davis	832	4,644	...	..	1	.....	12	.....
Mount Sinai Hospital *[4]	Philadelphia	M. Muschat	282	237	8	4	1	.....	12-24	.....
Pennsylvania Hospital *	Philadelphia	L. Hermann	664	2,831	19	9	2	11/1	12-36	20.00
Presbyterian Hospital *[4,10]	Philadelphia	J. C. Birdsall	.....	.....	...	..	1	7/1	12	50.00
†Temple University Hospital *[4]	Philadelphia	L. E. McCrea	220	1,695	6	2	1	.....	12	.....
Mercy Hospital *[4]	Pittsburgh	E. J. McCague	520	424	22	4	1	4/1	12	.....
†Roper Hospital *	Charleston, S. C.	J. J. Ravenel	522	625	14	8	3	7/1	12-36	50.00
Parkland Hospital *	Dallas, Tex.	A. I. Folsom	.....	.....	...	..	2	.....	12	50.00
University of Virginia Hospital *	Charlottesville, Va.	S. A. Vest	526	2,567	13	6	6	1/1	12	25.00
†Medical College of Virginia, Hosp. Div.*	Richmond, Va.	A. I. Dodson	546	2,629	31	6	2	4/1	12	37.50
†La Crosse Lutheran Hospital *	La Crosse, Wis.	A. H. Gundersen	500	4,000	25	6	1	4/1	12	150.00
State of Wisconsin General Hospital *	Madison, Wis.	T. Sinkinson	541	.....	20	13	1	7/1	12-36	25.00
Milwaukee County Hospital *[4]	Milwaukee	A. J. Hood	992	2,013	38	8	2	4/1	12-36	68.22

Hospitals, 105; Assistant Residencies and Residencies, 246

Mayo Foundation Fellowships—The Mayo Foundation for Medical Education and Research, Rochester, Minn.; D. C. Balfour, director; three-year fellowships, beginning quarterly, leading to the degree of M.S. or Ph.D. with field named from the University of Minnesota: in Anesthesia, Dermatology and Syphilology, Internal Medicine, Neurology and Psychiatry, Neurological Surgery, Obstetrics and Gynecology, Ophthalmology, Orthopedic Surgery, Otolaryngology, Pathology, Pediatrics, Physical Medicine, Plastic Surgery, Proctology, Radiology, Surgery, Urology; stipend $900 per year, (clinical fellowships including pathology and radiology—tentative estimate, 400).

a. Compensation arranged by medical school and hospital.
b. As reported in previous list.
c. In lieu of maintenance.
d. Residency in epilepsy.
e. Obstetrical training at Herman Kiefer Hospital, Detroit.
f. Training in gynecology at City of Detroit Receiving Hospital.
g. Assignments in psychosomatic medicine also available.
h. Fellowship offered in affiliation with Northwestern University Medical School, St. Luke's Hospital and Wesley Memorial Hospital, Chicago.
j. Outpatient and home delivery service only.
k. Training in gynecology at Barnes Hospital, St. Louis.
m. Represents number of patients treated and number of treatments per month.
n. Outpatient visits.
½. Approved by the Board as offering satisfactory six months training.
1. Approved by the Board as offering satisfactory one year training.
1½. Approved by the Board as offering satisfactory eighteen months training.
2. Approved by the Board as offering satisfactory two year training.
2½. Approved by the Board as offering satisfactory thirty months training.
3. Approved by the Board as offering satisfactory three year training.
4. Residencies open to women.
5. Clinical data include psychiatry.
6. Inpatients: Data refer to total inpatients treated in specialty. Obstetrical admission do not include newborn. In pathology and anesthesiology total hospital admissions are used.
7. Clinical data include neurology.
8. Includes fellowships.
9. Affiliated with Northwest Clinic, Minot.
10. Includes acceptable affiliate assignment at Urologic Clinic, Philadelphia.
11. Includes affiliate service at South Bend Medical Laboratory, St. Joseph Hospital, South Bend; Elkhart General Hospital, Elkhart and St. Joseph's Hospital, Mishawaka, Ind.
12. Represents training acceptable to Board in (1) radiology, (2) roentgenology, (3) therapeutic radiology or (4) diagnostic roentgenology.
13. Affiliated with North Carolina Orthopedic Hospital, Gastonia.
14. Type of training acceptable to Board: A-adult orthopedics; C-children's orthopedics; F-fractures; S-basic sciences.
15. Includes affiliate service at Emory University.
† Indicates temporary approval.

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THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 NORTH DEARBORN STREET - - CHICAGO 10, ILL.

Cable Address - - - - "Medic, Chicago"

Subscription price - - - - - - Eight dollars per annum in advance

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SATURDAY, AUGUST 17, 1946

FORTY-SIXTH ANNUAL EDUCATIONAL NUMBER

Since the turn of the century THE JOURNAL has published annually its report on medical education. This issue contains the forty-sixth annual report by the Council on Medical Education and Hospitals of the American Medical Association, providing detailed statistics and information for the year 1945-1946 on medical education in the United States and Canada and on hospital internships, residencies and fellowships in this country.

Reconversion to the prewar status is virtually complete, although a few schools have not yet graduated an extra class under the accelerated program by the completion of the time period covered in the report. But by June 30, 1947 there will have been an estimated extra 7,214 physicians graduated as a result of acceleration and increased enrolments as well as the admission and graduation of students at nine month intervals instead of annually. This contribution of medical schools to the war has been of inestimable value. It was effected under serious handicaps, chief of which were the depletion in numbers of faculty members, the necessity for continuous teaching and the increased patient load of the part time clinical faculty.

With equal vigor and vision the medical schools are now coping with the tremendous problems of reconversion. These extend well beyond the mere internal rearrangement of the curriculum to the former four year status. In addition, schools have responded in a most gratifying manner to the plea of the Veterans Administration for help in improving the quality of medical care for veterans, in initiating educational programs in veterans' hospitals and in making a career in the Veterans Administration more attractive to young physicians.

Another major responsibility of the medical schools, which has been met admirably, has been the provision of educational opportunities for physician veterans, both in review and refresher courses, and in hospital residencies and fellowships.

Thus the increased load imposed by the war is continuing into the postwar period. The performance of our medical schools in past years gives every promise that they will fulfil their new obligations at an equally high level.

THE 1946 FRESHMAN CLASS IN MEDICINE

For two years few able-bodied males except veterans have been permitted to complete their premedical studies preparatory to entering medical schools. The Selective Service System, the Army, the Navy, the Congress and the President of the United States have ignored the warnings of responsible and informed persons in the field of medical education regarding the dangers of such a policy. The latest figures available, as presented in this issue of THE JOURNAL by the Council on Medical Education and Hospitals, indicate that the freshman enrolments in 1946 entering classes will be (*a*) the smallest in many years but (*b*) not as small in numbers as might have been anticipated. Each of these points requires comment and clarification.

The prospective decrease in enrolments for 1946 must not be confused with the numbers of men and women who think they wish and are able to study and practice medicine. Many applicants are still being refused admission to medical schools, but this does not mean that the freshman class should be larger. Medical schools are charged with the responsibility for admitting not those who say, however earnestly, that they want to study medicine, but those judged to have the motivation, industry and ability for the pursuit of a profession involving the health and the lives of the people who will seek medical aid in the years to come. The admission of students lacking the qualifications for a medical career is wasteful and harmful no matter how much the student himself thinks he would like such a career. The cost of failures in medical school, in money and time and work and disappointment, is so great that extreme care must be exercised in the selection of students, even if enrolments decrease.

Freshman enrolments in 1946 will exceed 5,500 mainly because of the many veterans admitted. About 60 per cent of the 1946 freshman class will be in this category. The short period of time between V-E and V-J days and the consequent unexpectedly rapid demobilization have made this possible. Educators hope that these veterans do not include many who were rejected by medical schools previously or many who will lack the incentive and ability to pursue the study and practice of medicine at the high level characteristic of the profession in this country.

Paradoxically, the rapid demobilization of the Army, while seeming to ease the problem of numbers of acceptable applicants for medical schools in the current year at least, has intensified the problem of providing advanced training for returning medical officers.

About 12 per cent of those admitted as 1946 freshmen are women. Although this is appreciably more women than were admitted formerly, the number is not as large as might have been anticipated. Indications are that the remainder of the freshman class will be derived from these categories: physically disqualified men, 11 per cent; occupationally deferred men, 7 per cent; men under 18, 1 per cent, and men in other categories, excluding veterans, 9 per cent.

RESIDENCY TRAINING OF PHYSICIAN VETERANS

Never before in the history of medical education in this country has there been even an approximation of the demand of today for advanced training of thousands of physicians. The educational institutions and organizations of the country are making extraordinary efforts toward meeting the demand. In 1941, before the war, there were 5,256 physicians [1] in approved assistant residencies, residencies and fellowships in the hospitals of the country. Today there are 8,930 approved residency positions; this is an expansion of 70 per cent. The residents in 1941 were in 610 hospitals; the current approved residency list includes 887 hospitals.

The tremendous expansion that has occurred in a relatively short time represents an enormous effort and a phenomenal degree of cooperation, extending from the local hospital and its medical staff to such national organizations as the American boards in the various specialties, the Advisory Board for Medical Specialties and the Council on Medical Education and Hospitals of the American Medical Association. The aim of all concerned in providing these educational programs has been to furnish every qualified veteran with the opportunity for advanced study which he deserves, consistent with a high quality of training at the residency level. Among the numerous devices which have been employed in these programs are the temporary approval of residencies, collaborative studies and joint action by the American boards and the Council, the affiliation of many hospitals not formerly offering residencies with stronger and more experienced hospitals, and the positive role played by the medical schools and their hospitals.

This unprecedented effort to capitalize on every educational asset in our hospitals must not be considered to be an emergency response to an acute warborn need. In the years to come the hospital educational programs now serving the needs of veterans should and will provide opportunities for advanced education of physicians from all over the world. In increasing numbers these colleagues from abroad are looking to this country to occupy a leading place in providing a high grade of graduate medical education. The challenge must be met by American medicine with resolution and wisdom.

1. Residencies and Fellowships, J. A. M. A. **116**: 1070 (March 15) 1941.

POSTGRADUATE CONTINUATION COURSES

Semiannually the Council on Medical Education and Hospitals of the American Medical Association publishes lists of postgraduate continuation courses for physicians. Statistics on these courses and their attendance are given elsewhere in this issue. Such courses are mainly of a review and refresher nature. Unlike residencies, they do not carry credit toward certification by an American board, yet many board candidates utilize these courses as supplementary training in preparation for the board examinations.

Attendance at such courses in the past year was 45,955, almost three times the number attending in the preceding year. Here, as in the residency field, the efforts to meet the educational needs of physician veterans could hardly have been anticipated and could not have been successfully consummated without a deep sense of responsibility to veterans on the part of every institution and organization concerned with the education of physicians.

Noteworthy developments in the past year, besides the all time high in attendance, have been the increased variety, number and geographic distribution of courses, the increased number of courses of relatively long duration and the predominant role of the medical schools in organizing this work. Forty-seven medical schools were responsible for about 90 per cent of the courses in the Council's most recent listing of continuation courses. Here again we may expect that the best of these opportunities will remain part of our armamentarium of medical education in the years to come, to the end that physicians will increasingly consider their education to be a continuous process throughout life.

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FIBRINOGEN AND DIETARY PROTEIN

The main factors in the clotting of blood are reasonably well recognized; of these fibrinogen is considered the immediate precursor of fibrin, which forms the meshwork foundation of the clot. Fibrinogen is a globulin present in plasma but not in serum. The liver is believed to be the site of formation of this blood protein, and recent studies on hepatic injury have indicated that fibrinogen does not have extrahepatic origin.[1] The influence of either the amount or the kind of protein in the diet and the production of fibrinogen has been investigated but the observations have not been conclusive. A recent study of this question by Field and Dam [2] is therefore of timely interest.

Day old chicks were used and provided with both synthetic and natural rations. The Rochester investigators point out that the level of plasma fibrinogen can be influenced by the nature of the diet much more readily than can that of the serum proteins. In general,

1. Smith, H. P.; Warner, E. D., and Brinkhous, K. M.: J. Exper. Med. **66**: 801 (Dec.) 1937.
2. Field, J. B., and Dam, Henrik: J. Nutrition **31**: 509 (May) 1946.

the fibrinogen increased on a low or on a deficient plane of dietary protein intake to concentrations greater than observed on natural rations, whereas, when the protein of the feed was increased, the fibrinogen level in the plasma dropped. On a protein deficient dietary regimen when the fibrinogen content of the plasma increased, the characteristic diminution of serum proteins was observed. Definite increase in the allowance of vitamin K produced only a transient increase in fibrinogen in the plasma.

The foregoing observations indicate that, at least in the avian species, the formation of fibrinogen is essentially independent from that of the serum proteins.

Current Comment

DISTRIBUTION OF THE RURAL POPULATION AROUND URBAN SERVICE CENTERS

In a preliminary study it has been found that "of the 42 million open country population 16 million are estimated to live around urban centers and 26 million around rural centers." "Whereas we have been accustomed to thinking that 57,245,573 people lived in rural America, we now see that approximately 20 million of these people live in service areas of urban communities."[1] Although detailed study is necessary to obtain more information on the extent of this trend in specific areas or in each state, it is obvious that we must revise our thinking about the rural population. The changes that are taking place can be considered as a process of urbanization of the rural community. Such conditions must of course be recognized in any attempt to measure the need and supply of social and economic services for rural people. In estimating the need for additional physicians and medical facilities for the rural groups, consideration should be given to their location to town and city service centers to avoid establishing additional service and facilities where they are not needed.

LOCATION OF A MEDICAL SCHOOL

The question "Should we establish a new medical school?" immediately raises the corollary question "If so, where should the school be located?" In some instances the answer to the second question is easy because location on a university campus does not raise serious problems of available hospital facilities and clinical material. The problem becomes more difficult when universities that seek to establish medical schools are not located in large population centers or adjacent to established clinical facilities. The problem of location has been and is being debated at length at least in Alabama, North Carolina, Missouri, California and (in Canada) British Columbia. The desirability of locating a medical school on a university campus when all the conditions are propitious is self evident. Medical education and research may be conducted at the university level of quality on a par with other graduate scientific education and research, with a close integration of the medical with the other natural sciences of the university. However, location of a medical school on a university campus may in some instances involve evils far greater than separation of the school from the university. Unless patients, teachers (including clinicians in the specialties) and teaching hospitals are available at the campus, the medical school will be far inferior to a school located adjacent to such necessary facilities. Hospitals and clinics may be provided on a university campus unless the university is too far removed from population centers. Their construction demands much greater sums of money initially and through the years than are required in any other field of education. Apparently the states and universities now contemplating the establishment of new medical schools and university hospitals on a university campus seem to be unwilling to pay the price. If such programs are attempted with inadequate funds, the results will inevitably be an inferior grade of medical education.

REBATES ON EYEGLASSES

The recent disclosures indicative of a widespread practice of acceptance by physicians of rebates in connection with the sale of eyeglasses give emphasis to the importance of an amendment to the medical licensure law of New York in 1944. Its enactment followed the investigation in that state of certain abuses that had arisen in the operation of the workmen's compensation act. It provides that the license of a practitioner of medicine may be revoked, suspended or annulled or such practitioner may be reprimanded or disciplined if he

> has directly or indirectly requested, received or participated in the division, transference, assignment, rebate, splitting or refunding of a fee for, or has directly or indirectly requested, received or profited by means of a credit or other valuable consideration as a commission, discount, or gratuity in connection with the furnishing of medical, surgical or dental care, diagnosis or treatment or service, including x-ray examination and treatment, or for or in connection with the sale, rental, supplying or furnishing of clinical laboratory services or supplies, x-ray laboratory services or supplies, inhalation therapy service or equipment, ambulance service, hospital or medical supplies, physiotherapy or other therapeutic service or equipment, artificial limbs, teeth or eyes, orthopedic or surgical appliances or supplies, optical appliances, supplies or equipment, devices for aid of hearing, drugs, medication or medical supplies or any other goods, services or supplies prescribed for medical diagnosis, care or treatment under this chapter, except payment, not to exceed thirty-three and one-third per centum of any fee received for x-ray examination, diagnosis or treatment, to any hospital furnishing facilities for such examination, diagnosis or treatment.

Other states have laws proscribing the splitting of fees or the "buying" or "selling" of patients, including Alabama, Colorado, Iowa, Kansas, Kentucky, Michigan, Minnesota, Nebraska, Ohio, South Dakota, Tennessee, Virginia, West Virginia and Wisconsin. The 1944 New York amendment, however, seems more definitely to relate to the practice of receiving rebates. During 1947 the legislatures of forty-four states will meet in regular session.

1. Method of Estimating the Distribution of Unincorporated Rural Population Living In and Around Rural and Urban Population Centers by Size Classes for the United States Population, 1940. C. Horace Hamilton, Ph.D., Director of Sociological Research, Commission on Hospital Care, Rural Sociology Journal, 1946.

MEDICINE AND THE WAR

ARMY

MEDICAL MOTION PICTURE FILMS FOR LOAN

Under a plan recently approved by the War Department, professional medical motion picture films produced for use by the Surgeon General are now available for loan to medical schools, medical groups and individual physicians.

Because of the legal restrictions imposed on most of these films, loans will be made only on approval of the Surgeon General's Office and only for nonprofit showing to groups who are bound by the ethics of the medical profession. Borrowers are required to sign a restricted agreement, which includes the following conditions of loan:

1. The films will be shown only to members of the medical profession or allied scientific groups who are bound by professional ethics.

2. No admission fee of any sort will be charged for the viewing of the film, and no reproductions of the film in whole or in part will be made.

3. The film will be shown only to the group and for the purpose requested.

4. Suitable projection equipment and the services of a competent motion picture operator will be provided by the borrower, and the War Department will not be called on to furnish these facilities.

5. Cost of shipment of the film will be defrayed by the borrower.

6. The borrower will reimburse the government for such damage to the film, while in his possession, as may necessitate the replacement of the print or any part thereof.

7. Films will be returned the day after the last showing for which borrowed.

Approximately forty films on medical and surgical subjects are available for loan under this plan. Most of the films have a sound track and many are in color. All are 16 millimeter prints.

A list and synopsis of the subjects available, and copies of the application form for loan of prints, may be secured by writing the Surgeon General, Attention Chief, Education and Training Service, the Pentagon, Washington 25, D. C.

ARMY AWARDS AND COMMENDATIONS

Captain Richard C. Stauffer

The Army Commendation Ribbon was recently presented to Capt. Richard C. Stauffer, Fort Wayne, Ind., for meritorious service as orthopedic surgeon from April 1945 to December 1945 at William Beaumont General Hospital, El Paso, Texas. According to the citation accompanying the award, "Captain Stauffer, with the aid of his staff, cared for an exceedingly large number of difficult reconstructive cases. He spent many hours on the wards and in the operating rooms beyond the normal call of duty, resulting in a saving of hospital beds and manpower. His exceptional qualities of leadership, keen foresight, professional knowledge and sound judgment enabled him to maintain a high standard of efficiency and morale on the orthopedic section." Dr. Stauffer graduated from the University of Indiana School of Medicine, Indianapolis, in 1938, and entered the service July 2, 1943.

Captain William T. Wheeler

The Army Commendation Ribbon was recently awarded to Capt. William T. Wheeler, formerly of Rome, N. Y., for "exceptionally meritorious service as chief of dispensary service" at Fort Dix, New Jersey, from Nov. 1, 1945 to April 17, 1946. In organizing his service to handle the heavy burden imposed by separation center activities "Captain Wheeler demonstrated the highest type of professional and administrative ability and sound judgment." Dr. Wheeler graduated from the New York University College of Medicine in 1933 and entered the service Oct. 7, 1944.

Captain Charles Margulies

In THE JOURNAL, June 22, 1946, page 671, an error was made under Army Awards and Commendations. The Capt. Charles Margulies who received the Purple Heart and Oak Leaf Cluster for wounds received during the invasion of Normandy graduated from New York Medical College in 1941 and entered the service July 15, 1942. The Charles Margulies of Nutley, N. J., who graduated from the New York University College of Medicine in 1933 was also in the Army Medical Corps and had the rank of Major in June 1944.

NAVY

NAVY AWARDS AND COMMENDATIONS

Captain Howard Kramer Gray

The Legion of Merit was recently awarded to Capt. Howard Kramer Gray, Rochester, Minn., "for exceptionally meritorious conduct in the performance of outstanding services to the government of the United States," the citation continuing: "Exercising superior skill in his profession and unusual leadership in coordinating the surgical services of the hospitals to which he was assigned, Captain Gray contributed greatly to the successful accomplishment of the task of inspecting and alerting the naval hospitals throughout the United States with regard to anticipated wartime surgery. As chief of various naval surgical divisions he was instrumental in providing the most advanced surgical care for wounded naval, army and marine corps veterans of Pacific battle areas. Through the tireless application of his skill and ability as a surgeon and his unwavering devotion to duty, Captain Gray was responsible for saving the lives of many men in addition to greatly aiding these hospitals in the fulfilment of their vital missions during the prosecution of the war. His inspiring conduct throughout was in keeping with the highest traditions of the United States naval service." Dr. Gray graduated from Harvard Medical School, Boston, in 1927 and entered the service Dec. 26, 1941

Lieutenant Harold A. Rosenberg

Lieut. Harold A. Rosenberg, Waterbury, Conn., was recently awarded the Bronze Star "for meritorious service in connection with operations against the enemy as a medical officer attached to a Marine air base in the Kyukyu Islands area during the period April 5 to June 7, 1945. Lieutenant Rosenberg, laboring long hours under extremely adverse weather conditions and in areas which were daily subjected to enemy aerial assaults and shelling, maintained high standards of health and sanitation among the units based at the airfield served by his organization, thereby keeping epidemic diseases to a minimum and preserving the combat efficiency of personnel in the performance of the prodigious tasks which faced them during a particularly critical period of the Okinawa campaign. Lieutenant Rosenberg also rendered extremely valuable service in the treatment and evacuation of wounded personnel, frequently facing great danger in the performance of such duty. His courageous devotion to duty, tireless efforts and high professional skill contributed materially to the success of the Okinawa campaign and were in keeping with the highest traditions of the United States Naval Service." Dr. Rosenberg graduated from the Yale University School of Medicine in 1930 and entered the service Oct. 26, 1942.

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PHYSICIANS SEPARATED FROM SERVICE

ARMY MEDICAL CORPS OFFICERS RECOMMENDED FOR/OR RELIEVED FROM ACTIVE DUTY

Alabama

Allen, Robert L.....Tuskegee
Bailey, Marion P.....Montgomery
Barker, Prince P.....Tuskegee
Beck, Chester K.....Troy
Berger, Morley.....Montgomery
Bernell, Stanley P.....Montgomery
Chilton, Alfred M.....Anniston
Doherty, William R.....Tuscaloosa
Ellis, Frank F. Jr.....Birmingham
Greene, Gilbert B.....Birmingham
Hartnett, William G.....Montgomery
Hunt, Horace C.....Livingstone
Lucas, Robert L.....Winfield
McCown, William G.....Huntsville
Martin, Henry F.....Birmingham
Porter, George C.....Birmingham
Rhodes, Gilbert A.....Tuscaloosa
Sherer, Raymond J.....Jasper
Smith, Ralph J.....N. Birmingham
Spearman, George K.....Anniston
Stephens, Warren C. Jr.....Mobile
Williams, Roscoe C.....Annemanie
Witten, Morris.....Montgomery
Wood, Arthur A.....Mobile
Wood, William G.....Camp Hill
Woodley, Laurence S.....Tuscaloosa
Zieman, A. H.....Shore Acres Mobile

Arkansas

Beasley, Clifton H.....Little Rock
Grossman, Mervin H.....Tyronza
Halley, James F.....Brickeys
Kaufman, Benjamin M.....Fayetteville
Salmon, David D.....Little Rock
Shepherd, Earl D.....Marianna
Wolkin, Abraham.....Fayetteville

California

Adams, Deane T.....Glendale
Adams, Eldridge S.....Los Angeles
Ainlay, George W.....Beverly Hills
Anderson, Floyd K.....Hollywood
Anderson, Vetalis V.....Del Norte
Auld, William T.....Stockton
Bach, Leo F.....Long Beach
Benteen, Frederick H.....Grass Valley
Binder, Maxwell J.....Los Angeles
Blecker, Ralph F.....Fresno
Cain, Edmund F.....Anaheim
Cameron, William M.....San Francisco
Cates, Horace B.....Los Angeles
Clark, Gilbert.....Sacramento
Cosgrove, Jay B.....Los Angeles
Coughlin, William F.....Carmel
Covell, Harold D.....Los Angeles
Crane, Jay F.....Los Angeles
Cunningham, Terrence.....Los Angeles
Dahlman, Rynol A.....Los Angeles
Damron, Milton H.....Huntington Park
Day, Roy W. Jr.....Oakdale
Delamere, Granville S.....Marysville
Denny, Lorin W.....San Diego
Detwiler, Howard F.....Burbank
Donnelly, James G.....San Francisco
Douds, Robert J.....Bakersfield
Douglass, George H.....Los Angeles
Downing, George C.....San Francisco
Dunn, George P.....San Francisco
Eastman, William R. Jr.....La Jolla
Eckert, John F.....Huntington Park
Edwardes, Arthur F.....Los Angeles
Edwards, George S.....Santa Barbara
Everman, Cornwall C...Point Reyes Sta.
Felton, Jean S.....San Francisco
Franzi, Antonio J.....Modesto
Gershanov, Edward M.....Berkeley
Geyser, Harry A.....Brentwood
Gisla, Benedict G.....San Francisco
Gribble, Robert C.....San Diego
Gunderson, Ernest O.....Berkeley
Hadden, Malcolm B.....Berkeley

California—Continued

Hall, Gordon C.....Soledad
Hollien, Maurice J.....Eureka
Hollister, John F.....San Luis Obispo
Horowitz, William.....Los Angeles
Houzvicka, Otto A.....San Diego
Jacks, Francis M.....San Francisco
Jantzen, Roland R.....Redding
Johns, Chester T.....Morrs Bay
Katz, Leonard.....Burney
Kay, Raymond M.....Van Nuys
Kayland, Stuart.....North Hollywood
Keipp, James V.....Long Beach
Kiefer, Albert L.....Los Angeles
Levan, Norman E.....Los Angeles
Lum, Paul A.....Alameda
Lusigman, Frank W.....San Francisco
McCarty, Ray B.....Riverside
McKeever, Francis M.....Los Angeles
Maher, Edward J. Jr.....San Jose
Mandel, Harry.....Westwood Village
Mapes, Russell W.....Los Angeles
Miller, David.....Los Angeles
Mullenix, Ralph B.....San Diego
Nemethi, Carl E.....Hollywood
Owens, Raymond W.....Oildale
Pantangco, Irineo E.....Los Angeles
Pomer, Sydney L. H.....San Francisco
Raffington, Donald L.....Compton
Rogers, Maurice B.....Los Angeles
Roman, Francisco J.....Los Angeles
Rukke, Raymond V.....Monterey
Sacasa, Carlos F.....Pasadena
Sergis, Cyrus.....Sacramento
Shearer, Robert V.....Escondido
Smith, Jack L.....West Los Angeles
Sperling, Samuel J.....Los Angeles
Sprong, David H. Jr.....Los Angeles
Stanton, James T.....Bakersfield
Stern, Morris E.....San Fernando
Sudduth, Leland F.....Los Angeles
Thomason, Hume A.....Los Angeles
Thunen, Philip E.....Marysville
Trolan, William H.....Santa Cruz
Tunnell, Alfred M.....Lodi
Upton, John R.....San Francisco
Urabec, John H.....El Monte
Van De Pol, Andrew.....Modesto
Vincent, Glen P.....San Francisco
Westerhout, Charles E.....Brea
White, Ralph E.....Santa Ana
Whiting, Edward G.....Berkeley
Wilson, Warren A.....Venice
Zack, Morris M.....Los Angeles
Ziedman, Irving.....Los Angeles

Connecticut

Darnley, James D.....Bridgeport
Dressler, Morris.....Hartford
Humpage, Norbert W.....Winsted
Keys, Robert C.....Bridgeport
Rosenbaum, Jack D.....New Haven
Sadusk, Joseph F. Jr.....New Haven
Saposnik, Jacob J.....West Haven
Schwartz, George R.....Newington
Shure, Abraham L.....New Haven
Traggis, Demetrius G.....New London
Truex, Edward H. Jr.....Withersfield
Van Antwerp, Lee D.....Meriden

District of Columbia

Alfaro, Victor R.....Washington
Briggs, Crenshaw D.....Washington
Dunham, Jean L.....Washington
Little, Cervera R.....Washington
Miller, Cecil E.....Washington
Peacock, John H. Jr.....Washington
Sugar, Oscar.....Washington
Threadgill, Francis D.....Washington
Yochelson, Leon.....Washington
Yokley, Charles W.....Washington

Florida

Adamo, Frank S.....Tampa
Alexander, Lassar.....Miami
Baranowski, Joseph A.....St. Petersburg
Burch, George W.....Ft. Lauderdale
Carson, Russell B.....Ft. Lauderdale
Deane, Harry R.....Bay Pines
Dees, John E.....Miami
Futch, William D.....St. Petersburg
Linz, Frank T.....Tampa
Mellen, Noel C.....Pensacola
Merchant, William R.....Moultrie
Nichols, William G. Jr.....Orlando
Pate, Julien C. Jr.....Tampa
Pride, Atwell B.....Daytona Beach
Riley, Edwin G.....Jacksonville
Smith, James S.....Miami
Snyder, Frank L.....Hollywood
Stipe, Harvie J.....Ft. Myers
Sutter, LeRoy M.....Orlando
Travers, Milton P.....Miami Beach
Wilson, Wesley W.....Tampa

Georgia

Adair, Morgan C.....Atlanta
Archer, George F.....Atlanta
Belle, Martin S.....Atlanta
Davis, William B.....College Park
Geeslin, Lawrence E.....Atlanta
Hauck, Allen E.....Atlanta
Johnson, Marion S.....Augusta
Krantz, Simon.....Atlanta
McKemie, William F.....Coleman
Peterson, Thomas A.....Savannah
Poer, David H.....Atlanta
Reppert, Laurence B.....Atlanta
Robertson, James G. Jr.....Carrollton
Rosen, Leonard B.....Atlanta
Sharpley, John G.....Savannah
Velkoff, Abraham S.....Atlanta

Illinois

Allen, Glen I.....Peoria
Arbeiter, Herbert I.....Chicago
Barron, Elmer A.....Chicago
Barrow, Leonard A.....Chicago
Batko, Bernard B.....Chicago
Baylin, Felix R. H.....Chicago
Bellucci, John B.....Chicago
Bernard, Frank D.....Chicago
Black, Crawford H.....Salem
Borrowman, Robert.....Chicago
Bowers, Paul A.....Chicago
Burgert, Paul H.....Lake Forest
Campagna, August J.....Chicago
Campbell, Michael J.....Chicago
Cardenas, Valentin O.....Chicago
Carroll, Kelso A.....Hines
Clayocomb, Arnold H.....Minonk
Collins, Harold J.....La Harpe
Cook, Richard S.....Chicago
Coyne, Albert D.....Chicago
Crocker, Melvin H.....Quincy
Davis, Thornton A.....Chicago
Denyes, Orville L.....Momence
DeStefano, Frederick W.....Chicago
Diamond, Alfred A.....Chicago
Dixon, Charles H.....Rockford
Epstein, Hyman H.....Chicago
Eschelbacher, Leo J.....Mt. Vernon
Esposito, Andrew R.....Murphysboro
Fairshter, Alex E.....Brookport
Freedman, Robert J.....Chicago
Fried, Samuel L.....Chicago
Goodfriend, James.....Chicago
Gore, Maurice.....Chicago
Grossman, Maurice O.....Chicago
Hill, Herman H.....Congress Park
Hoffman, Charles W.....Joliet
Hoover, Allen H.....Chicago
Jarosz, Adolf J.....Chicago
Joseph, Samuel R.....Chicago
Kesert, Benjamin H.....Chicago

PHYSICIANS SEPARATED FROM SERVICE

Illinois—Continued

King, Ray W.....Peoria
Kirsner, Joseph B.....Chicago
Koranda, George A.....Chicago
Kruger, Sam.....Chicago
Learner, Aaron.....Fulton
Lemon, Henry M.....Chicago
Levy, Edward W.....De Kalb
Lewis, Robert B.....Chicago
Linkowski, Izrael.....Chicago
Loring, Milton J.....Chicago
McGrail, William C.....Chicago
McGurie, Francis H.....Chicago
Mavrelis, William P.....Chicago
Munch, Robert F.....Chicago
O'Neill, James B.....Chicago
Pachman, Daniel J.....Chicago
Patejdl, William.....Chicago
Phillips, Walter J.....Chicago
Plenk, Henry.....Evanston
Poska, Theodore A.....Moline
Reisch, Jacob E.....Springfield
Roberg, Norman B.....Chicago
Rogers, James D.....Joliet
Rosenstiel, Henry C.....Freeport
Rothenberg, Harold J.....Chicago
Sabath, Donald J.....Chicago
Savitt, Leonard E.....Chicago
Schettler, Robert E.....Red Bud
Schneider, Gerald E.....Chicago
Schwartz, Leslie.....Chicago
Shellow, Harold.....Chicago
Shulruff, Eli.....Chicago
Shure, Norman M.....Chicago
Skrypkun, Joseph J. A.....Chicago
Sloan, Noah H.....Chicago
Speigel, Irving J.....Chicago
Stamler, Maurice.....Macon
Stone, Herman H.....Evanston
Swanson, Paul E.....Rockford
Swisher, William P.....Evanston
Szanto, Paul B.....Chicago
Thomson, Stewart C.....Byron
Tighe, William J.....Chicago
Trepagnier, Francis B.....Chicago
Uncapher, Rex P.....Evanston
Urse, Valadimir G.....River Forest
Ushkow, Moe E.....Chicago
Waisman, Morris.....Chicago
Was, Harold H.....Chicago
Whaley, John H.....Oak Park
Wilson, Edward T.....Chicago
Wosset, Oscar W.....Chicago
Ziman, Charles I.....Chicago
Zitman, Irving H.....Chicago

Indiana

Alexander, Eugene J.....Evansville
Arbuckle, Russell L.....Indianapolis
Bailey, Perry W.....Fort Wayne
Beierlein, Karl M.....Fort Wayne
Bowers, Jesse W.....Fort Wayne
Carson, Everett W.....Indianapolis
Donnelly, Everett F.....Lucerne
Dukes, Richard E.....Dugger
Kauffman, Nelson N.....Indianapolis
Ladig, Donald S.....Fort Wayne
LaFollette, Forrest R.....New Salisbury
Long, Leonard.....Bluffton
McCormick, Wilbur C.....Terre Haute
Miller, Clyde E. Jr.....Indianapolis
Millis, Robert J.....Crawfordsville
Nicosia, John B.....East Chicago
Olsen, Albert L.....Marion
Pollak, Lewis.....Indianapolis
Reich, Clarence E.....Evansville
Sims, James L.....Indianapolis
Somma, Fred F.....Liberty
Stoelting, Vergil K.....Winchester
Switzer, Robert A.....Bloomington
Trout, Carl J.....Lafayette
Van Dorn, Myron J.....Indianapolis
Vetter, Karl W.....Elkhart
Walsh, Edmund N.....Whiting
Williams, Everett W.....Columbus

Kentucky

Bornstein, Max.....Louisville
Cook, Arnold A.....Lexington
Davis, Joseph.....Smiths Grove
Kelly, Robert P. Jr.....Louisville
Leonard, Stewart W.....Louisville
Mayer, James A.....Mayfield
Millen, James M.....Lebanon
Quill, Laurence M.....Covington
Spradlin, Marion C.....Somerset

Louisiana

Braden, Henry E. III.....New Orleans
Cacioppo, Dionisus V.....Hammond
Cahen, Irvin.....New Orleans
Daunis, Charles R.....Westwego
Day, Robert C.....New Orleans
DeBakey, Ernest G.....New Orleans
DeBakey, Michael E.....New Orleans
Dowell, James W.....Pineville
Failla, Anthony.....Pineville
Fatter, Mervin E.....New Orleans
Fey, William P.....Lafayette
Gulotta, Carl J.....New Orleans
Hallaron, John J.....New Orleans
Joseph, Cheney C.....White Castle
Kaplan, Murrel H.....New Orleans
Kleinsasser, LeRoy J.....New Orleans
Newman, William H.....New Orleans
Nicholas, Abraham J.....Shreveport
Norris, John G.....Farmerville
Rogers, Hollis T.....Winsboro
Sanders, Jason C.....Shreveport
Seale, Arthur L.....Pineville
Trichel, Burdette E.....Harrisburg

Maryland

Bacharach, David Jr.....Baltimore
Berman, Sidney.....Baltimore
Bordley, James III.....Baltimore
Bowen, Francis D. T.....Cumberland
Casey, Jesse F.....Perry Point
Davis, Harry.....Mount Rainier
De Vincentis, Michael L.....Baltimore
Dixon, Alfred B.....Baltimore
Fineman, Jerome.....Baltimore
Gelperin, Abraham.....Baltimore
Gilbert, Jules.....Mt. Washington
Hamburger, Morton L.....Baltimore
Kelmenson, Harry.....Baltimore
Kremen, Abraham.....Baltimore
Lindsay, Merrill K.....Bethesda
Mishler, Jay E.....Perry Point
Pettengill, Warren M.....Bethesda
Radman, H. Melvin.....Baltimore
Richwine, Alfred H.....Chevy Chase
Ritchings, Edward P.....Annapolis
Sartorius, Norman E. Jr..Pocomoke City
Seidel, Joshua.....Baltimore
Sodaro, Manuel.....Baltimore
Stewart, George A.....Baltimore
Weinberg, James A.....Baltimore
Wiggins, Charles H.....Baltimore

Massachusetts

Adelman, Henry.....Charlton
Ascher, David S.....Boston
Barron, Edward M.....Worcester
Bell, Benjamin.....Mattapan
Belsky, John.....Chelsea
Berezin, Martin A.....Harding
Branch, Dexter R.....Lynn
Brassau, Arthur C.....Worcester
Brownlee, Robert E.....Boston
Butler, Henry R.....Quincy
Cahill, Francis P.....Cambridge
Cavanaugh, Thomas J.....Boston
Chandler, Alfred G.....Jamaica Prain
Ciccone, Roy.....Boston
Clinton, Marshall Jr.....Cambridge
Congdon, Palmer.....Dedham
Cox, Michael J.....Stockbridge
Curley, George A.....Mattapan
Deacon, Walter E.....Plymouth

Massachusetts—Continued

Dias, John F. Jr.....New Bedford
Dill, Edward J.....Ludlow
Dobson, William M.....Northampton
Driscoll, Cornelius J.....Revere
Fabro, John A.....Dartmouth
Farrington, Ralph C.....Framingham
Felderman, Jacob.....Rutland Heights
Finnegan, William P.....Chelsea
Finsen, Samuel I.....Southwick
Fuller, Henry S.....Boston
Gavigan, Arthur J.....Harding
Gelfman, Raymond.....Brookline
Gilbert, Meyer M.....Worcester
Giventer, Max.....Rutland Heights
Goodman, Max.....Boston
Greene, Daniel C. Jr.....Pittsfield
Ham, Thomas H.....Brookline
Howe, Clifton D.....Pittsfield
Johnson, Goodwin A.....Brookline
Kaplan, Rubin H.....Rutland Heights
Karp, Meier G.....Brookline
Kerr, Walter S. Jr.....Cohasset
Kirkwood, Samuel B.....Winchester
Landman, Louis.....Northampton
Lappin, Sydney H.....Brighton
Licata, Daniel D.....Revere
Lionberger, David L.....Dedham
Littmann, David.....W. Medford
Lyons, Arthur W.....Brighton
Marder, Samuel H.....Westborough
Matson, Donald D.....Boston
Messina, Salvatore J.....Somerville
Meyers, Marvin T.....Jamaica Plain
Monroe, Willys M.....Pittsfield
Nelson, Carl T.....Jamaica Plain
Nersessian, Aznive.....Norwood
Nossiff, George S.....Milford
O'Brien, Thomas E.....Lynn
Powers, Joseph W.....Roxbury
Rak, Ian Paley.....Newton
Richardson, Edward P. Jr.....Brookline
Ross, George L.....Holyoke
Rubenstein, Allan A.....Mattapan
Salwen, Robert.....Boston
Saphir, Nelson R.....Squantum
Schechtman, Harold I.....Fitchburg
Schulz, Reuben Z.....Wellesley Hills
Shaw, Lister H.....Lowell
Sherman, Sol.....Brighton
Smith, Horace W.....Boston
Smith, Stewart R.....Worcester
Squires, Raymond B.....Boston
Sterling, Haskell.....Brookline
Sutherland, George F.....Worcester
Talbott, John H.....West Newton
Valenstein, Arthur.....Boston
Winslow, Donald J.....Roxbury
Zanfagna, Philip E.....Methuen
Zeff, Sidney M.....Pittsfield

Michigan

Albi, Robert J.....Lake City
Andre, Harvey M.....Detroit
Bell, Charles M.....Grand Rapids
Bergman, Theodore I.....Detroit
Bodine, Harold R.....Battle Creek
Bohr, David F.....Detroit
Buchner, Harold W.....Detroit
Carothers, Daniel Jr.....Charlotte
Carpenter, Luther C. Jr....Grand Rapids
Cohn, Daniel E.....Detroit
Dale, Mark.....Detroit
DeSmyter, George C.....Grosse Pointe
Dickman, Harry M.....Detroit
Dixon, Frederick W.....Dearborn
Dolbee, Malcolm K.....East Lansing
Ellias, Elmer P.....Detroit
Fischer, Frederick J.....Detroit
Fisher, George S.....Detroit
Fitzporter, Alonzo L.....Dearborn
Goodman, Louis.....Monroe
Gradis, Howard H.....Detroit
Hester, Eustace G.....Saginaw

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PHYSICIANS SEPARATED FROM SERVICE

Michigan—Continued

Kuhn, Albert A.....Detroit
Jasion, Lawrence J.....Detroit
Lass, Edward H.....Oxford
Lazar, Morton R.....Detroit
Maniscalco, Anthony E.....Fort Custer
Maxfield, Jack E.....Detroit
May, Frederick T.....Detroit
Penberthy, Grover C.....Detroit
Pensler, Leslie.....Detroit
Ray, Tibor H.....Detroit
Reynolds, William F.....Detroit
Ridley, Roger W.....Belleville
Rogoff, Abraham S.....Detroit
Roman, Stanley J.....Detroit
Ross, Samuel H.....Detroit
Rundles, Walter Z.....Flint
Sandy, Kenneth R.....Flint
Schneider, Alexander J. N.....Detroit
Skopek, Frank S.....Saginaw
Socall, Charles.....Detroit
Timmerman, Eugene C.....Coopersville
Weed, Milton R.....Detroit
Whitlock, Stanley C.....Dimondale
Witter, Joseph A.....Detroit
Young, Donald A.....Detroit

Minnesota

Anderson, Richard W.....Merrifield
Becker, Frederic T.....Duluth
Dodds, William C.....Baudettem
Ferguson, Donald J.....Minneapolis
Graff, Richard J.....New Ulm
Kaplan, Samuel.....St. Cloud
Lehnhoff, Henry J. Jr.....Rochester
Lindberg, Vernon L.....S. Minneapolis
Medelman, John P.....St. Paul
Odegard, John K.....St. Paul
Parker, Wilbert H.....Chisholm
Rogers, Robert G.....Minneapolis
Short, Jacob.....St. Paul
Thompson, Carl O.....Hendricks
White, Asher A.....Minneapolis

Missouri

Allen, William B.....Kansas City
Browdon, James H.....Joplin
Calkins, Larry L.....Kansas City
Conrad, Adolph H. Jr.....St. Louis
Edmundson, David P.....New Madrid
Ellett, William H.....Appleton City
Elliott, Edward H. Jr.....Carrollton
Elliott, Robert W.....St. Louis
Fischer, Erich.....St. Louis
Freund, Samuel J.....St. Louis
Hartman, Paul T.....St. Louis
Holland, Frank F.....St. Joseph
Huger, Raymond A.....Normandy
Lee, John P.....St. Louis
Lerner, George.....Excelsior Spring
Max, Paul F.....St. Louis
Miksicek, John E.....St. Louis
Polsky, Morris.....Kansas City
Quirin, Warren S.....St. Louis
Reh, Edward P.....St. Louis
Schnedorf, Jerome G.....Kansas City
Schwartzmann, John R.....St. Louis
Sigoloff, Emanuel.....St. Louis
Silverman, Daniel.....Springfield
Simpson, Robert H.....Columbia
Stillerman, Hyman B.....St. Louis
Sullivan, William J.....Kirksville
Susanka, William D.....St. Louis
Thomas, Herrick M.....St. Louis
Wood, George H.....Carthage
Zemlyn, Milton.....St. Louis

Nebraska

Bantin, Clarence F.....Omaha
Cash, Paul T.....Omaha
Gatewood, John W.....Omaha
Sullivan, Paul J.....Rushville
Zinneman, Helmut H.....Lincoln

New Jersey

Antopol, William A.....Newark
Barkhorn, Charles W.....Newark
Bernheisel, Louis E.....Tuckahoe
Blum, Milton.....Jersey City
Bobadilla-Riquelme, Juan E.....Dover
Bogacz, John S.....Jersey City
Booken, Gerald J.....West Orange
Boudwin, Norman K.....Trenton
Brown, Frank J.....S. River
Caprio, Orlando G.....Newark
Caruso, Anthony T.....Newark
Cavalli, Ralph D.....Camden
Cohen, Samuel.....Jersey City
Denbo, Elic A.....Camden
Drossner, Jacob L.....Camden
Dunn, Henry I.....Elizabeth
Emory, George B. Jr.....Morristown
Erler, Robert E.....South Orange
Feinberg, Harry D.....Long Branch
Flax, Ira.....Newark
Frankel, Theodore H.....Plainfield
Giglio, Alphonsus S. V.....Elizabeth
Graham, Richard B.....Pt. Pleasant
Greenberg, George A.....Somerville
Greene, Richard W.....Newark
Guilfoil, Paul H.....South Orange
Halberstein, Abraham.....Scotch Plains
Hess, George A.....Titusville
Hillel, Joseph.....North Bergen
Hines, Harrison R.....Newark
Hodas, Sidney M.....Red Bank
Hoffman, Harry.....Lyons
Horland, Ephraim.....Marlboro
Janowitz, Henry D.....Paterson
Kesselman, Samuel R.....Newark
Lepore, John M.....Newark
Licht, Sidney.....Keyport
Lyerly, James M.....Plainfield
Minschwaner, George G.....Trenton
Moress, Edward J.....Hillside
Morton, Thomas V. Jr.....Bloomfield
Ortolano, James J.....Hoboken
Pindar, William A. Jr.....N. Bergen
Pollack, Louis.....Newark
Pollack, Roy.....Woodcliff
Press, Edward.....Englishtown
Rich, Wallace E.....Cedar Grove
Rinzler, Harvey.....Toms River
Rosen, Robert L.....Hackettstown
Ross, Peter W.....Passaic
Schurman, Francis H. C.....Caldwell
Shangold, Jack E.....Sergeantville
Silverman, Andrew.....Newark
Sparks, Paul R.....Burlington
Toy, Calvert R.....New Brunswick
Vogel, Nathan F.....East Orange
Wallach, Bernard.....North Plainfield
Whims, Clarence B.....Ventnor
Zuckerman, Louis A.....Paterson

New York

Anchel, David.....New York
Andrews, Harold E.....Eggertsville
Appel, Sidney J.....Bronx
Arcuri, Raynold A.....Mt. Vernon
Aronoff, Bernard C.....Bronx
Aronoff, Jacob S.....Brooklyn
Ashley, Robert C.....Little Falls
Balcer, Edwin A.....New York
Ball, Donald N.....New York
Banzer, Joseph H.....Hollis
Barahal, Hyman S.....Kings Park
Barbey, John N.....Yonkers
Baron, Edgar.....Maspeth
Barone, Vincent J.....Elmhurst
Beck, Arthur.....Brooklyn
Bellanca, Antonio F.....Buffalo
Belson, Maurice A.....New York
Benkovic, Frank E.....Binghamton
Bennett, Graham L.....New York
Bergen, Marshall.....Richmond Hill
Berman, Alfred.....Flushing
Bernstein, Louis.....Brooklyn

New York—Continued

Bernstein, Nathan K.....Syracuse
Blum, Bernard M.....Brooklyn
Blum, Samuel D.....New York
Boeck, Virgil H. F.....Dundee
Boffardi, Mario R.....Brooklyn
Bogen, Eugene F.....Batavia
Bohnengel, Charles A.....New York
Bonsignore, Marco R...North Rochester
Bosco, Arthur G.....Long Island City
Bouton, Malcolm A.....Albany
Braun, Edmund M.....Kew Gardens
Brodie, Joseph R.....Elmhurst
Brody, Edward L.....New York
Brooks, Harold W.....Rochester
Brownstein, Samuel R.....New York
Bulkley, Seymour M.....Odessa
Bush, Louis.....Baldwin
Calhoun, Edward J.....Flushing
Cannizzaro, Franklin J.....Brooklyn
Carlucci, Joseph F.....Astoria
Casano, Andrew A.....Amsterdam
Cebula, Jerome M.....Brooklyn
Chase, Samuel L.....New York
Chezar, Henry H.....Bronx
Chorba, William G.....New York
Ciaglia, Pasquale.....Utica
Cinder, Julius.....Brooklyn
Cohen, Jerome L.....Troy
Cohn, Theodore D.....Brooklyn
Colbert, Fritz.....New York
Connelly, Leo A.....Buffalo
Conroy, John W.....New York
Conroy, Thomas F. Jr.....New York
Coppola, Andrew R.....Brooklyn
Crowley, Daniel F.....New York
Cuozzo, Michael A.....Brooklyn
Delaney, Joseph S.....Astoria, L. I.
Del Vecchio, Vincent A.....Ossining
DeTata, Ettore J.....Brooklyn
Deutsch, Ralph.....Brooklyn
Diamond, Bernard.....Brooklyn
Diamond, Nathan.....Freeport
Dier, Hilton H.....Lake George
Di Iorio, Benjamin A.....Utica
Dinin, Benjamin G.....Brooklyn
Dolgin, Joseph.....New York
Donshik, Jacob.....Astoria
Doran, William T. Jr.....Bronxville
D'Oronzio, George B.....New York
D'Orsogna, Edward I.....Binghamton
Drachman, Theodore S.....Buffalo
Dressler, Sidney H.....Staten Island
Dumanis, Abraham "A".....Flushing
Dunne, Thomas J.....Brooklyn
Dwork, Kermit G.....Forest Hill
Eichenholtz, Sidney N.....Yonkers
Epstein, Joseph.....Brooklyn
Epstein, Nathan I.....New York
Epstein, Sidney S.....Yonkers
Ferguson, Wilfrid H.....Brooklyn
Firschein, Isidore.....Brooklyn
Fish, Nicholas.....Mt. Kisco
Flax, Milton E.....White Plains
Fleischman, Henry.....New York
Fleischmann, Edgar P.....Flushing
Forchheimer, Ludwig L.....New York
Freeman, Nathan.....Brooklyn
Friedman, Charles.....Sunnyside
Friedman, Orel.....Schroon Lake
Froehlich, Herman.....New York
Fuller, Morris E.....Schenectady
Funk, Ian C.....New York
Giammette, Dominic A.....Yonkers
Gibel, Harry.....Brooklyn
Ginsburg, Leonard B.....New York
Gold, Isadore R.....Buffalo
Gold, Joseph P.....Hudson
Goldberg, Arthur.....Yonkers
Goldberg, David.....New York
Golob, Maury.....Brooklyn
Goodside, Victor.....New York
Gramlich, John B.....New York
Green, Monroe H.....New York

PHYSICIANS SEPARATED FROM SERVICE

New York—Continued

Greenwalt, Tibor J.....New York
Gurvitch, Samuel M.....Bronx
Gutman, Paul E.....New York
Hahn, Joseph.....New York
Handelsman, Jacob R.....Brooklyn
Hare, James.....Syracuse
Hartley, Joel N.....New York
Hartman, Joseph.....Castle Point
Hawkes, Lawrence P.....Pearl River
Herzlich, William.....Brooklyn
Hess, Leo.....New York
Hill, Frank P.....Forest Hills
Hoffman, James F.....Bolivar
Howard, Timothy J.....Newport
Hust, Rudolph F.....Mount Upton
Imperato, Ralph.....Bronx
Ingoglia, Nicholas.....Hollis
Jaffe, Ira A.....Bronx
Jampel, Sydney.....Brooklyn
Jampol, Isaac.....Bronx
Johnson, Albert B.....Jamestown
Joseph, Charles R. Jr.....Brooklyn
Juvelier, Bernard W.....Buffalo
Kalkstein, Mennasch.....New York
Kamen, Edward R.....Jamaica
Kauer, Joseph T.....New York
Kaufmann, Abraham G.....Brooklyn
Keenan, John J.....Troy
Kelley, Howard D.....Walton
Kern, Walter S.....Orangeburg
Khayat, Elizabeth.....Brooklyn
Kiven, Nathan J.....Bohema
Kleiger, Barnard.....New York
Klein, Louis.....New York
Koppel, Hilde G.....New York
Krakower, Irving.....Brooklyn
Kretzschmar, Herman C.....Brooklyn
Kutzer, Max.....Syracuse
Lange, William A.....Brooklyn
Leiby, George M.....New York
Leider, Sydney.....Forest Hills
Leland, Stanley J.....New York
Lempert, Samuel.....Long Island City
Lenke, Sidney E.....Brooklyn
Lerner, Joseph.....Rockaway Beach
Leveridge, Leo L.....New York
Levin, Samuel G.....Brooklyn
Levinstim, Louis.....Brooklyn
Levinstein, William I.....Rochester
Lewy, Frederick J.....Elmhurst
Lipson, Lester.....Monticello
Lipstein, Samuel.....Liberty
Livant, Saul.....New York
Luca, Salvatore.....Bronx
Lynch, George E.....Avon
Malament, Maxwell.....New York
Mandelbaum, Theodore.....Brooklyn
Manheimer, Robert H.....Brooklyn
Mannix, Edgar P. Jr.....New York
Marjey, Elmer J.....New York
Markham, Mark J.....Bronx
Marshall, Henry B.....Elmira
Mattarella, Diego.....Brooklyn
Medden, Edwin J.....Rochester
Meister, Edward.....Franklin Sq.
Melaville, Eugene F.....Rochester
Meltzer, Maxwell.....New York
Menustik, John Jr.....New York
Merk, Harvey J.....Tuckahoe
Messutta, Henry L.....Montrose
Metcalf, Roger G.....Lyons
Meyerhoff, Kurt H.....Schenectady
Migel, Dauchy.....New York
Miller, Harry.....Jamaica
Miller, Saymour A.....Brooklyn
Minars, Reuben H.....Jamaica
Miskimon, Robert M.....Eggertsville
Molyneaux, Evan W.....Buffalo
Montgomery, Elbert T.....Hempstead
Montgomery, James R.....White Plains
Morgenstern, Edward.....Woodside, L. I.
Morris, John J.....New York
Moser, Wilhelm J. A.....Central Bridge

New York—Continued

Mosher, Charles B.....Syracuse
Mouber, Israel I.....Bronx
Muller, Charles S.....Brooklyn
Murray, Harrison F. Jr.....New York
Muscatello, Daniel B.....New York
Myerson, Samuel.....New York
Namiot, Charles.....New York
Neighbors, Archie L.....Poughkeepsie
Neistadt, Isidore I.....Valley Stream
O'Connell, William J.....Staten Island
Omstead, Trevalyn W.....Pearl River
Packard, Edward N.....Saranac Lake
Parnall, Edward.....Rochester
Pearl, Samuel.....Brooklyn
Perelman, Luis.....New York
Pesnel, Maxmilian E. Jr.....Albany
Piekielniak, Thaddeus W.....Utica
Pines, Kermit L.....New York
Post, Joseph.....New York
Priviteri, Charles A.....Bronx
Reitwiesner, Andrew G.....Mount Vernon
Reitz, Herbert R.....Buffalo
Riegelhaupt, Julius H.....Far Rockaway
Rinzler, Seymour H.....New York
Roberts, Lawrence P.....Orangeburg
Robinson, Charles A.....St. Albans, L. I.
Robinson, Milton.....New York
Rockwell, Robert E.....Saratoga Springs
Roseman, Charles.....New York
Rosen, George.....New York
Rosendale, David R.....Utica
Rosenkranz, Gabriel.....Brooklyn
Rosenzweig, Henry.....Brooklyn
Roth, Karl A.....Corona
Rothfeld, Samuel H.....Brooklyn
Rubin, Albert.....Brooklyn
Rubin, Morris.....Queens
Sanders, Murray.....New York
Sapsin, Saul S.....Far Rockaway
Sara, Nathan O.....Brooklyn
Sarnoff, Jack.....Long Island City
Sawicky, Herman H.....Brooklyn
Sawitsky, Arthur.....Brooklyn
Schapiro, Abraham G.....New York
Schnap, Isidore.....Kings Park
Schneider, Leonard.....Jamaica, L. I.
Schneider, Paul M.....Rochester
Schultz, Louis A.....Bronx
Schumacher, George A.....New York
Schwartz, Albert M.....New York
Schwartz, Louis.....New York
Schwartz, Nathan E.....East Nassau
Schwartz, Samuel E.....Jackson Heights
Schwimmer, Samuel.....New York
Scribner, Walter E.....New York
Self, Edward B.....New York
Selman, David.....Spring Valley
Shapiro, Norton.....Buffalo
Sheiman, Robert.....New York
Silverman, Irving.....New York
Simon, Samuel.....Poughkeepsie
Smith, Durwood J.....New York
Smith, James J.....New York
Smith, Robert.....Boonville
Smith, Sigmund L.....New York
Sobel, Irwin P.....New York
Soiffer, Maxwell.....Ozone Park
Sokolove, Charles.....Staten Island
Soldineer, Marshall Y.....Eggertsville
Solomon, Walter.....New York
Stamm, Eric.....Liberty
Stansky, Charles.....Bronx
Steckler, Carl.....Flushing
Stein, Martin L.....Brooklyn
Steinberg, Abraham.....Ozone Park
Steinberg, Morris F.....New York
Steiner, Seymour L.....New York
Steinman, John F.....Rochester
Street, Dana M.....White Plains
Sweeney, Dennis W.....Altamont
Tepperberg, Irving.....Bronx
Topkins, Paul.....Brooklyn
Tranella, Augustus J.....Rochester

New York—Continued

Trunfio, Joseph A.....Utica
Tucker, Dan.....New York
Tunick, Frederick L.....Neponsit
Turiga, John R.....Beacon
Turner, William J.....Northport
Vieta, John O.....New York
Waknitz, Frederick W.....New York
Waltuch, Max.....New York
Watts, Lloyd E.....Poughkeepsie
Webb, Vincent C.....Glen Cove, L. I.
Weinberger, Jerome L.....New York
Weinstein, Benedict X.....Brooklyn
Weinstein, E.....Brooklyn
Weintraub, Harry.....Rockville Centre
Weiss, Bernard.....Brooklyn
Wells, Lloyd L.....New York
White, Edgar W.....New York
Widlitz, Abram R.....Rockville Centre
Wienick, Leopold H.....New York
Wilburne, Morris.....Brooklyn
Wiseman, William M.....Brooklyn
Worden, Robert P.....Auburn
Yaverbaum, Arnold.....Brooklyn
Yochelson, Samuel.....Buffalo
Zuckerman, Leo A.....Saratoga Springs
Zuckerman, Seymour.....Forest Hills

Ohio

Alexander, Fred W.....New Philadelphia
Alkoff, Louis.....Cincinnati
Amato, Nicholas G.....Cincinnati
Amstutz, Omar C.....Bellefontaine
Apfelberg, Herbert J.....Chillicothe
Arnold, Emmett W.....Columbus
Bachman, H.....Delaware
Barr, Edward.....Dayton
Becker, Dwight L.....Spencerville
Berry, Jack J.....Cleveland
Biedenbender, Harold L.....Hamilton
Blotner, Carl.....Dayton
Bolotin, Joseph H.....Warren
Brown, Wilbur M.....Mansfield
Campbell, George W.....Columbus
Cole, Allan A.....Logan
Cragg, Nelson R.....Cincinnati
Cranston, Clyde J.....Wakeman
Cremer, Albert E.....Lima
Cullison, Robert M.....Brecksville
Doran, Patrick C.....Akron
Einhorn, Harry.....Dayton
Eiser, Joseph.....Toledo
Elkins, Charles W.....Cleveland
Elliott, William S.....Palestine
Esposito, Albert C.....Chillicothe
Falk, John H.....Cincinnati
Ferguson, Robert J.....Ashland
Fox, Thomas E.....Columbus
Frame, Victor A.....Cincinnati
Freeman, Marvin S.....Cleveland
Garrett, William M.....Frankfort
Gillis, Robert T.....Martins Ferry
Good, Roland H.....Van Wert
Gordon, Asher T.....Dayton
Gribbin, Edward A.....Toledo
Grothjan, Cletus A.....Toledo
Haines, Robert A.....Cincinnati
Hawley, Chapin.....Cincinnati
Higley, Charles S.....Cleveland
Howland, Elihu S.....Cincinnati
Jackson, Carl R.....Chillicothe
Kahn, Joseph R.....Cleveland
Keller, Karl W.....Canton
Klatman, Samuel.....Youngstown
Koller, William S.....Dayton
Lerro, Sam A.....Cleveland
Leyrer, Carl A.....Hamilton
Livisay, Leonidas F.....Ironton
Mabee, Horace G.....Cleveland Heights
Malasky, Bernard S.....Cleveland Heights
Marcus, Louis J.....Cleveland
Marshall, Edward A.....Cleveland
Meyer, William G.....Columbus
Millikin, Neil.....Hamilton

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PHYSICIANS SEPARATED FROM SERVICE

Ohio—Continued

Mosher, Henry A.....Dayton
Murbach, Clarence F.....Archbold
Nolan, Don E.....Dayton
Nulsen, Ray O.....Cincinnati
Ockuly, Edward F.....Toledo
Petznick, George W.....Shaker Heights
Pickard, Edgar C.....Cuyahoga Falls
Robben, Francis J.....Bridgeport
Roberts, David A.....Dayton
Rodabaugh, Franklin D.....Williamstown
Rogoff, Robert.....Cleveland Heights
Rusk, Ross P. Jr.....Cadiz
Sackett, George L.....Shaker Heights
Sakler, Barnet R.....Cincinnati
Schmitt, Clarence F.....Canton
Schnitker, Max T.....Toledo
Schwartz, Edward D.....Cleveland Heights
Searl, Howard A.....Cuyahoga Falls
Seebohm, Paul M.....Cincinnati
Seligman, Bert.....Toledo
Shecket, Harman A.....Cleveland Heights
Shensa, Lewis S.....Youngstown
Slaughter, Fred M.....Steubenville
Stewart, John S.....Shaker Heights
Taplits, Sol.....New Richmond
Treister, Bert A.....University Heights
Ulicny, Harry P.....Salem
Wagner, Carl F.....Cincinnati
Wales, Craig C.....Youngstown
Weir, David R.....Cleveland Heights
White, Edgar H.....Cincinnati
Zollett, Phillip B.....Dayton

Pennsylvania

Adelman, Frederick P.....Philadelphia
Adelman, Samuel I.....Philadelphia
Bachmann, Lawrence C.....Pittsburgh
Ballantyne, James Van.....Pittsburgh
Barnes, Lloyd T.....Philadelphia
Basinger, Wade F.....Narberth
Bennett, Willis L.....Pittsburgh
Bloomberg, Maxwell H.....Pittsburgh
Britsch, William P. Jr.....Philadelphia
Broen, Elmer M.....Philadelphia
Brown, George L.....Huntingdon Valley
Bryer, Benjamin F.....Pittsburgh
Burby, Vincent P.....Wilmerding
Butcher, James.....Philadelphia
Ciotola, Augustine A.....Philadelphia
Clements, Edmund D.....Coraopolis
Cleveland, Robert B.....Philadelphia
Cohen, Jerome H.....Johnstown
Cooper, William M.....Pittsburgh
Corriere, Joseph N.....Easton
Crew, Robert S.....Chestnut Hill
Deichler, John W.....Overbrook
Derr, Russell H.....Denver
DeSantis, Archie J.....Erie
Dils, Grover C.....New Salem
Donald, James G.....Philadelphia
Dubbs, Alfred W.....Allentown
Eaton, William R.....Pittsburgh
Einhorn, Nathan H.....Philadelphia
Eisenberg, Isadore J.....Philadelphia
Fager, Joseph S.....Camp Hill
Feo, Louis G.....Philadelphia
Filmyer, Edward A. Jr.....Glenside
Finkelhor, Howard B.....Pittsburgh
Freiman, Henry D.....Philadelphia
Garber, Miles D. Jr.....Carlisle
Gearhart, Merriam.....Philadelphia
Gehris, Leroy A.....Reading
Gibbons, Charles A.....Kingston
Ginsberg, Joseph E.....New Castle
Glotfelty, Earl.....Waynesboro
Gluchoff, Jacob L.....Bloomsburg
Goluboff, Bernard.....Philadelphia
Gray, Robert T.....Claysville
Green, Manuel E.....Pittsburgh
Gump, Robert B.....Pittsburgh
Gustaitis, Joseph A.....Scranton
Guy, William B.....Pittsburgh
Haimes, Solomon M.....Allentown

Pennsylvania—Continued

Hammers, Benjamin N.....Smithton
Harris, James C.....Philadelphia
Hazzard, William R.....Landenburg
Hickox, Glifford T.....Erie
Hirshorn, Arthur.....Philadelphia
Jablonski, Lawrence F. Jr.....Pittsburgh
Jones, Reeves F.....E. Stroudsburg
Kastlin, George J.....Pittsburgh
Kauffman, Abraham L.....Philadelphia
Kessler, Harry T.....Philadelphia
Klein, Theodore C.....Du Bois
Kooser, Robert R.....Westmoreland City
Korn, John J.....Wilkes Barre
Krajeski, Romuald J. F.....Wilkes Barre
Krieger, Harry L.....Easton
La Clair, Charles H. Jr.....Norristown
Large, Fred D.....Clairton
Levin, Robert W.....Philadelphia
Lewis, James E.....Turtle Creek
Long, William C. Jr.....Lock Haven
Luongo, Mario A.....Pittsburgh
McAndrew, Francis J.....Bethlehem
MacKercher, Peter A.....Pittsburgh
Mackmull, Gulden.....Langhorne
MacMillan, Karl D.....Oakmont
Mandelkern, Clarence.....Philadelphia
Martin, George E.....Pittsburgh
Mason, James B.....Philadelphia
Miller, Edgar A. Jr.....Gettysburg
Miller, Marlyn W.....Altoona
Morningstar, William A.....Pittsburgh
Morosini, Charles J.....Scranton
Morrow, Jack W.....Pittsburgh
Morton, Smith D.....Pittsburgh
Mulherin, John L.....Glen Lyon
Murphy, Michael J.....West Pittston
Noe, William L. Jr.....Langhorne
Pastor, Bernard H.....Philadelphia
Patrick, David R.....Monaca
Petty, William McC.....Pittsburgh
Pressman, Robert S.....Germantown
Primiano, John P.....Philadelphia
Ratcliffe, Griffith J.....Philadelphia
Ratke, Henry V.....Philadelphia
Robinson, Frederick A. Jr.....Philadelphia
Rocco, Nicholas J.....Philadelphia
Rogers, William C.....Philadelphia
Rothkope, Henry.....Philadelphia
Roxby, John B. Jr.....Souderton
Sagerson, Robert P.....Johnstown
Sall, Manuel.....Philadelphia
Sanders, George B.....Lancaster
Savidge, Samuel L.....Northumberland
Schumann, Francis.....Philadelphia
Seitz, Nevin H.....Hanover
Serber, William.....Philadelphia
Sexton, Richard J.....Easton
Seygal, Alexander W.....Harrisburg
Shaver, John C.....Pittsburgh
Shoenfelt, James W. Jr.....Altoona
Silverberg, Minor D.....Pittsburgh
Smith, Donald C.....Wilkes-Barre
Snyder, Gordon E.....New Milford
Snyder, Joseph E.....Philadelphia
Sonder, Max J.....Philadelphia
Trosow, Alfred.....Philadelphia
Truckenmiller, Geo. A.....Weatherly
Ulane, Roman V.....McAdoo
Waggoner, Irving M.....W. Chester
Wagner, William.....Philadelphia
Waldman, Sydney.....Philadelphia
Wallace, Homer D.....Glenshaw
Waring, Clarence W.....Pittsburgh
Widdowson, William W.....Indiana
Youngkin, James F.....Easton
Zinsser, Harry F. Jr.....Pittsburgh

Texas

Berry, George W.....San Antonio
Blend, Max H.....Dallas
Carswell, Winston E.....Dallas
Connor, William H.....Houston
Cutler, Hayden H.....Houston

Texas—Continued

DeLange, Arnott.....Galveston
Fiegel, Walter L.....Lewisville
Hargrave, Robert L.....Wichita Falls
Hay, Bruce H. H.....Wichita Falls
Heidelberg, Charles H.....Marshall
Hooper, John M.....McKinney
Horn, Jesse M.....Fort Worth
Howard, Herbert H.....Fort Worth
Jansen, Harold G.....Dallas
Kernodle, Jefferson D.....Wichita Falls
King, Albert C.....San Antonio
Logan, Joseph A.....Ft. Worth
Martin, Claud A.....Austin
Martin, Leon H.....Borger
Moore, John D.....Fort Worth
O'Neill, Francis E.....Sanderson
Parker, George E.....Baumont
Patterson, Casey E.....Dallas
Rives, C. T.....Winters
Robertson, David L.....Wichita Falls
Robertson, James E.....Hillsboro
Rohrer, George E. Jr.....Houston
Salerno, Joseph P.....Houston
Siddons, George Y.....Fort Worth
Spikes, Lowell W.....Lubbock
Stanton, William P.....San Antonio
Stork, Walter J.....Houston
Towler, Martin L.....Salveston
Truett, Harvey K.....McKinney
Tucker, Jesse N.....Houston
Wallis, William McV.....Houston
Willis, James G.....Galveston
Woodward, Lewis O.....San Angelo

Utah

Christensen, Chester H.....Bountiful
Christopherson, William M.....Provo
Davis, Melvin R.....Garland

Virginia

Bishop, William R.....Front Royal
Boynton, Ben L.....Norfolk
Colton, Warren A.....Kecoughtan
Daughton, Alva D.....North Arlington
Eisner, Cyrus I.....Arlington
Grim, Kenneth B.....Charlottesville
Hill, Haywood N.....Richmond
Hopkins, Julius H.....Petersburg
Irby, Jethro H. Jr.....Blackstone
Johnson, Garnett W.....Danville
Owen, Eric F. D.....Hooes
Porreca, Daniel A.....Roanoke
Ray, Alfred C. Jr.....Ashland
Rosenbaum, Arthur B.....Arlington
Schelin, Eric C.....Richmond
Schultz, Frank B.....Falls Church
Taylor, William W.....Norfolk
Walker, Glenn L.....Roanoke
Weitz, Paul.....Roanoke
Zaller, Seymour.....Hampton

Washington

Beattie, John F.....Renton
Canning, Thomas E.....Colville
Culp, John H.....Seattle
Dewey, Louis S.....Okanogan
Harris, David M.....Seattle
Hogue, Philip N.....Seattle
Jarvis, Joseph B.....Tacoma
Lofberg, Carl.....Aberdeen
MacLaren, Alfred H.....Kirkland
Maddison, Frank R.....Tacoma
Morgan, John D'Arcy.....American Lake
Perry, Almeron T.....Spokane
Sarro, Louis.....Seattle
Stuart, Rudolph E.....Spokane
Wick, Harold W.....Seattle
Wilt, Burton S.....Seattle
Wilton, John R.....Hunts Point Bellevue
Yengling, Arthur A.....Walla Walla

Wyoming

Powell, Kenneth E.....Sheridan

ORGANIZATION SECTION

Washington Letter

(From a Special Correspondent)

Aug. 12, 1946.

Congress Scraps Funds for Mental Health Institute

Congress dropped from the final appropriation bill $4,358,000 which was to finance the first year of the proposed coordinated national program to fight mental sickness, as well as $850,000 which was to have started the central workshop in the suggested $7,500,000 neuropsychiatric research institute at Bethesda, Md. The U. S. Public Health Service had announced that construction of the new institute, which was to have an annual budget of $10,000,000, would be completed in two years. Dr. Dale C. Cameron, assistant to Dr. Robert Felix, chief of the Division of Mental Hygiene, stated that enabling legislation signed July 3 by President Truman would make the institute a reality in that time. Selective Service officials have stated that 1,100,000 men were disqualified for military service because of mental disorders.

Patterson and Bradley Pledge Intensified Research on Artificial Limbs

Secretary of War Robert P. Patterson and Gen. Omar N. Bradley, Veterans Administrator, have pledged themselves to support unceasing research to devise better artificial limbs for war veterans. They addressed a group of amputees at the Pentagon building who demonstrated limbs already produced in the American research program. These included what were described as lighter, more durable and more usable arms produced by the Northrop Aviation Corporation of Los Angeles. The limbs have airplane control cords, extensors, wrist rotation and wrist flexion and were said to be less cumbersome than other limbs.

Navy Retains 3,000 Hospital Corpsmen Past September 1

The Navy Department has announced that it will retain on active duty in naval hospitals beyond September 1, the date set for total demobilization, some 3,000 hospital corpsmen to help treat the 32,000 sick and wounded patients requiring special attention. The Navy estimates that the corpsmen will be able to leave service by March 1, 1947. Among the 3,000 are reserves as well as inductees, who will assist in caring for the large number of patients, which includes amputees and paralytic, tuberculous and blind patients. Corpsmen with eighteen months' active duty are usually released from service.

Senators Favor Department of Health, Education and Security

Senators Robert A. Taft, Republican of Ohio, and J. William Fulbright, Democrat of Arkansas, have issued a joint statement advocating establishment of a special governmental department, with cabinet status, to handle health, education and security. They are joint sponsors of a measure which seeks to improve government efficiency through creation of the special department. They contend that it can be done so that more effective assistance can be given in these fields to state and community institutions.

Approval of $7,411,563 in Hospital Construction

The Civilian Production Administration has announced that hospital construction valued at $7,411,563 was approved from March 26 to May 31 in a sample list of twelve of the seventy-one CPA districts. Valuation of hospital construction approved in the twelve districts was, for Springfield, Mass., $433,000; New York City, $130,250; Pittsburgh, $108,000; Detroit, $2,351,000; Atlanta, $641,890; Birmingham, $1,366,505; Chicago, $1,137,318; Denver, $155,000; Houston, $15,000; Los Angeles, $455,600, and Minneapolis, $571,500. Spokane, Wash., did not have any. The twelve districts were selected as being geographically, commercially and industrially representative for a nationwide sampling of hospital construction jobs.

Bradley Picks Veteran Hospital Site Adjacent to Arlington National Cemetery

A controversy has resulted from the selection by General Omar N. Bradley, veterans administrator, of a 23 acre plot of land adjacent to Arlington Memorial Cemetery as the site for a proposed 750 bed veterans' hospital. The tract was said to have been intended by the owners for a 15 to 20 million dollar apartment hotel. Arlington County officials protest that construction of a tax free veterans hospital would mean a loss of $230,000 annually in taxes to the county government.

Hershey Promises that Scientifically Trained Men Will Be Deferred

Local draft boards will have full discretion to determine whether scientifically trained persons engaged in "research or other work of value to the physical well-being or economic life of the country would be entitled to deferment consideration." This is what Major Gen. Lewis B. Hershey informed a White House meeting, after the American Chemical Society had protested that new selective service rules, if honestly applied, would virtually eliminate all occupational deferments.

Drug Cures Tick Fever When Rabbit Serum Fails

A Fairfax, Va., couple who were found to be immune to rabbit serum, the usual treatment for Rocky Mountain spotted fever, were reported by Alexandria Hospital officials to have been cured by para-aminobenzoic acid. Dr. Charles Hoyt of the hospital staff consulted Dr. P. A. McClendon of the George Washington Medical School faculty, who suggested the drug, basing his proposal on results achieved by the Army and Navy against scrub typhus.

Appropriation Bill Provides Free Cars for Leg Amputees

Included in the appropriation bill signed by President Truman is $30,000,000 for the purchase of specially equipped automobiles for more than 16,000 leg amputees and ex-soldiers who have lost the use of their lower limbs. Watching the signing was Representative Edith Nourse Rogers, Republican of Massachusetts, who first introduced the legislation and has promised arm amputees that she will endeavor to have cars provided for them also.

Deferment of Medical, Dental, Osteopathic and Veterinarian Teachers Proposed

The warning that failure to defer college teachers from the draft has resulted in the proposal by the National Selective Service that an estimated 5,000 "essential" college teachers be deferred. Eligible for deferment under the plan would be teachers engaged in physical sciences, medicine, dentistry, osteopathy and veterinary medicine.

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THE WAGNER-MURRAY-DINGELL BILL

Hearings on S. 1606—To Provide for a National Health Program

(NOTE.—*This is a condensation of the verbatim report of the hearings.*—ED.)

(Continued from page 1230)

United States Senate, Committee on Education and Labor.

JUNE 24, 1946

HONORABLE JAMES E. MURRAY, Presiding

PRESENT: Senators Murray and Donnell.

Statement of Ludwig Anderson of the Cooperative League of the United States of America

MR. ANDERSON: My name is Ludwig Anderson. My address is 726 Jackson Place N. W., Washington, D. C. I represent the Cooperative League of the United States, a consumers organization of national scope. We have selected two spokesmen of outstanding examples of successful cooperative medical care plans which are typical of consumer controlled plans: Group Health Association of Washington, D. C., and Group Health Mutual, Incorporated, of St. Paul. We should like with your permission to have inserted in the record a statement, which has not yet reached my desk but which is on the way, by George Jacobson, executive secretary of Group Health Mutual of St. Paul. We have asked Mr. Harry Becker, president of the Washington, D. C., organization to present a statement outlining the experience of the Group Health Association and to voice the opinion of other independent groups.

Statement of Harry J. Becker, President, Group Health Association, Washington, D. C.

MR. BECKER: My name is Harry J. Becker. I am president of the Group Health Association. Group Health is a local District of Columbia organization. Its address is 1328 I Street. It is a consumer sponsored, prepaid medical service plan. I have been asked by the Cooperative League of the United States to testify on behalf of Group Health Association and a number of other consumer sponsored medical care organizations. This morning I speak as president of Group Health Association and on behalf of Benjamin Rozenzweig, secretary for the board of directors of the Greenbelt Health Association, Greenbelt, Md., Walton County Agricultural Health Association, Inc., Monroe, Ga.; Dr. M. Shadid, Community Hospital, Elk City, Okla.; Robert Y. Wright Jr., manager, Newton County Rural Health Services Association, Inc., Decatur, Miss.; Dr. Elmer Richman, medical director, Labor Health Institute, Inc., St. Louis, and L. R. Barry, Wheeler County Rural Health Service, Wheeler, Texas.

SENATOR DONNELL: Pardon me. I notice, Mr. Becker, you omitted the name of Dave Parmer, president of the Complete Service Bureau, San Diego, Calif. Did you intend to leave that out? MR. BECKER: I did not intend to. There are three aspects of this question which I desire to take up in detail.

1. Can voluntary plans meet the nation's health needs? And, as a part of this question, what has been the experience of voluntary plans in meeting health needs?

2. Relationship of voluntary plans to a national health program.

3. What shall be the priniciples governing the administrative and financial relationship of the government program to voluntary plans in the emerging national health program?

The term "voluntary agency" or "voluntary plan" has been used by witnesses before this committee to include all types of nonprofit and commercial plans based on the application of the insurance principle. Unless the type of voluntary plan is specified, any such discussion is confusing. There are two basic types of voluntary prepaid medical and hospital plans in this country:

1. There are those that assume responsibility for providing or rendering a medical or hospital service through a staff supervised and paid by the organization or through facilities meeting conditions and standards specified by the agency.

2. The other type of voluntary agency or prepayment plans is those organizations that do not assume responsibility for the provision of medical or hospital service. This type of plan, unlike the first, does not assure care. This type of plan collects funds on a periodic payment basis and disburses these funds for financial obligations incurred or claims made by individual members or policyholders; this type of plan provides a financial or business service. Most of the medical society sponsored prepayment plans and the commercial insurance company health and hospital policies are in this category; most of them provide cash payment or cash benefits for selected types of illness and for limited periods of hospitalization—they do not assure the person covered the care he may need.

Consumer sponsored plans such as those that I represent today were organized out of the belief that the right to health is a basic human right just as much as is the right to food and shelter and clothing. We have demonstrated that it is possible for a small portion of the population to assure themselves this right by prepaying the costs of comprehensive care, that preventive medicine and necessary medical treatment can be provided when economic and organizational barriers to medical service have been removed. But we can say on the basis of our own experience—not theory—that voluntary plans, at best, can extend the principle of periodic prepayment of medical care to only a limited number of people. Through the development of the principle of periodic payment the small section of our population covered by consumer sponsored plans has been able to remove substantially the economic barrier to medical care. Some spokesmen for voluntary plans are not willing to face this fact or admit publicly that experience already has shown that voluntary plans cannot satisfactorily assure needed medical and hospital care to all or even a major portion of the population.

The voluntary plans under whatever type of sponsorship and no matter how they are organized or where they operate have demonstrated the following weaknesses when they are evaluated as a method for assuring care at a bearable cost for the entire people:

First weakness: The lower income families, representing the greater part of our adults and children, cannot meet the cost of the monthly prepayment dues. Those who belong to health insurance plans are predominantly from the middle income and upper income part of the population. The lower the income group, the smaller the proportion of that group participating in a prepaid health plan; and those in the lower income groups are rarely participants. Group Health Association, for example, is the only consumer prepaid plan in the Washington D. C., area. We know for a variety of economic reasons that we cannot meet the medical care needs of the million persons living in this area. The same reasons why Group Health Association cannot expect to serve all the persons in the Washington area will govern inability of any other voluntary plan to meet the health needs of all the persons in the Washington community. The reason why this is true is easily understood when the economic facts are known. If we assume that the families with income below $3,000 per year cannot spend more than 5 per cent of total income for health and medical care services; if we assume that approximately half or more than half of the families in the D. C. area have an income of $3,000 or less per year, then we know that at least half the people in the area that we serve cannot afford membership in a plan providing anything like comprehensive service. Membership in plans offering less than comprehensive service is not purchasable for most of these people. To the extent that employer contributions are practicable, a larger percentage of the population would be potential members. To illustrate this point further, Group Health Association dues are $2.50 per month for each adult and $1.75 per month for each child, or $10.25 per month for a family of five. Our coverage is far more comprehensive than most plans. However, there are certain restrictions on admission of individual federal employees, imposed for health conditions existing before admission and other less significant limitations. A family of five would have to have an income of about $3,000 per year to pay dues in Group Health Association if total

family expenditures for health and medical care services are not to exceed 5 per cent of their income.

The second weakness: The medical service coverage in all voluntary prepayment plans tends to be limited to catastrophic illness protection; few plans approach comprehensive coverage. If all the persons in the community were participating in the plan and payments were scaled in relation to ability to pay, coverage could be complete; however, if this were true, the plan would no longer be voluntary.

Third: Costs of enrolment and turnover of membership, that is, in a voluntary plan, must be paid by all the members. It is not uncommon to find an annual turnover in membership of 25 per cent. This means that a substantial proportion of the voluntary prepayment funds must be used for administrative and promotional expense.

Fourth: No voluntary organization can be expected to reach all the population. There are many administrative difficulties in the collection of dues for individuals not permitted to enjoy the privileges of payroll deductions. The self employed, persons in rural areas, irregularly employed persons and federal government employees are difficult to reach because their dues must be paid individually, with a resulting high cost of collection.

Fifth: Membership in voluntary plans, because they do not include all the population or a representative cross section, tend to be composed of those persons who must feel the need of protection. This makes for an unfavorable selection of persons covered unless rigid requirements for enrolment are established. Persons with a felt need for medical services are the ones most likely to join. Persons who have little occasion to use the service tend to drop out faster than others. The cost for those who remain is higher than would be true if the membership represented a true cross section of the community. The group of the population that most needs protection against the economic barrier to necessary health and medical care services cannot expect to pay for this protection through membership in voluntary plans because of prohibitive costs.

In recognition of our own inherent weaknesses we support S. 1606 because we believe that medical care must be assured to all the people as a right rather than as a privilege for a few. Attainment of this end depends on removing economic barriers to necessary medical care that exist for the overwhelming majority of people. This can be done only through the universal application under government auspices of the successfully demonstrated principle of periodic payment. When members of voluntary plans now prepay their medical care, they agree to a voluntary tax on their income. A universal application of the principle of prepaying the costs of medical care is possible only through the exercise of the government's power to tax, whether it be through the form of payroll deductions, through government taxes or through both.

Many voluntary plans, particularly those that assume no responsibility for services, do not have consumer representation on the policy making boards. Voluntary plans, even those sponsored by hospital associations and medical societies, cannot and should not be expected to assume the responsibility of coordinating facilities and professional personnel on a communitywide or statewide basis. A community plan for health services must integrate the public health activities with provisions for treatment, a task that cannot be expected of the voluntary prepayment plan. A national health program must embrace the health and medical care needs of all the people. Only government can exercise the responsibility required in the planning, financing and administration of such a program for health.

If we say that voluntary agencies cannot do the job, does that mean that they have no place in a national health program? We believe that they do. We believe that voluntary health and medical care agencies organized for the purpose of providing health services have a significant and essential place under our form of government in a national health program. Frankly we are not too concerned about what happens to most of the existing commercial plans, nor are we particularly concerned, in the event that the Congress sees fit to pass S. 1606, about the survival of those plans that operate primarily as financial agencies for the collection and distribution of funds. This function should be taken over by the National Health Insurance fund and the top collection agencies of government. We are concerned, however, that a national health bill shall promote the growth and extension of those consumer and other medical service agencies representing the public interest.

Many of our cooperative plans and many of the union management sponsored insurance plans are torn between a recognition of their weakness and a fear of state supervision. If government is to assume governmental responsibility for meeting the nation's health needs but at the same time permit freedom of individuals as consumers to organize, own and maintain an organization of their choosing for the provision of medical care, this opportunity should be protected by legislative action as it now is in S. 1606 and not left to administrative rule and regulation.

(*Mr. Becker told why he thought S. 1606 would help voluntary plans.*)

(*Mr. Becker adversely criticized the Taft bill in detail.*)

MR. BECKER: We are all familiar with the public agency that has asked hospitals and clinics to render service to public beneficiaries at less than the cost of providing that service. This is tantamount to expecting voluntary agencies to subsidize public programs. Public agencies should pay the full cost for the service required by persons for whom it is responsible for assuring care. The national health program should not embody the principle that voluntary agencies must subsidize it through provision of service at less than cost. We want to urge retention of all those provisions of S. 1606 which provide for representatives of the public in policy making. We feel the public interest should be reflected and protected in the administration at local and state levels as well as in the program planning and development at federal and regional levels. General advisory groups, as separate from the various technical advisory bodies, should have a majority of representatives of the public interest. S. 2143, which is primarily a program for the needy, does not offer opportunity for growth and development of medical service plans such as Group Health Association. We feel that it establishes the undesirable principle of public subsidy of voluntary health insurance plans. It does not safeguard the public interest to the extent essential in a government health program. It does not provide for the extension of health services to all the people nor does it make possible an immediate extension of the important public health and maternal and child health and medical services. The burden of costs of the program that is provided for the economically needy group is much greater proportionately to the poorer states and the states with the greater need for federal assistance.

SENATOR MURRAY: I understand that a few years ago this organization which you represent, the Group Health Association of Washington, had some controversy with the District Medical Society. Could you tell us what that problem was at that time, what the argument was between your organization and the District Medical Society?

MR. BECKER: Senator Murray, I was not on the board of directors nor was I president of the Group Health Association at that time. In fact, I was not even a resident of Washington during the beginning of those discussions with the District Medical Society and the American Medical Association. I do not feel that I am as well qualified as I should like to be to discuss that, but a review of the material that is available, my summary of the situation, is something like this: At the time that the employees of HOLC wanted to pay money collectively into a common fund and with that money employ doctors on a salary basis to provide the members with medical service, the District Medical Society felt that that was contract practice. The District Medical Society did at that time urge the doctors in Washington not to furnish insurance service to physicians employed by Group Health. The District Medical Society did deny membership in the District Medical Society to Group Health doctors, and thereby denied membership in the American Medical Association to Group Health doctors. The District Medical Society did make it difficult for Group Health Association physicians to have the necessary hospital privileges to take care of group health patients in hospitals. This action, of course, on the part of the District Medical Society, made it very difficult for Group Health to recruit well qualified physicians in the early days. It made it very difficult for Group Health to assure its members the quality of care that the members wanted and were willing to pay for. I am glad to make a matter of record that that disagreement between Group Health Association and the District Medical Society is now a matter of history and that our relations with the District Medical Society at the moment are satisfactory. My relations, as president of Group Health, with individuals and with officials of the District Medical Society have been most pleasant.

SENATOR MURRAY: But at the time you originally undertook organization, this Group Health Association, the controversy became very bitter? MR. BECKER: I understand that, Senator, yes.

SENATOR MURRAY: Did it not result in an antitrust suit being brought by the Department of Justice, United States Government, against the Medical Society? MR. BECKER:

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That is true, Senator. It might be well to submit for the record a brief for the states that was submitted to the Supreme Court of the United States with respect to the case, the American Medical Association versus the United States Government.

SENATOR MURRAY: Since that time, however, you say this relationship between your group and the District Medical Society has changed and now your relations are entirely satisfactory? MR. BECKER: I would say that since that time our relationships have continued to improve. SENATOR MURRAY: Continued to improve. MR. BECKER: It takes a long time for scars to heal, but the scars are healing.

SENATOR MURRAY: The local medical society has developed a plan of its own, a so-called medical and service plan of the District of Columbia Medical Society. Can you compare the service rendered by that plan with the plan that you represent? MR. BECKER: My knowledge of the District of Columbia proposed prepayment plan for medical service consists entirely in reading the several newspaper accounts, but on the basis of those accounts I would say that our two plans are distinctly different in character and in purpose. The District Medical Society plan provides for the collection of funds to pay for medical expense of those persons who seek a physician who is in solo practice in the community. The services that the plan will pay for are, of course, quite limited, because of the very small payment that is being set up. The plan in its total amount of fees that it would pay would, in my judgment, hardly cover the expense of catastrophic illness.

SENATOR MURRAY: Does the plan cover office and home medical care or does it just provide hospital care? MR. BECKER: I am not sure, Senator Murray, that I can answer that question. It does provide a maximum of $300 of medical service in any one year or any one illness to a single adult or $500 to a family. From my own personal experience, and from my experience with Group Health, I would feel that that is a very limited coverage. Many single illnesses will exceed $300.

SENATOR MURRAY: In other words, you do not think that is sufficient. Could you furnish for the record the full details of the organization of your Group Health Association? The plan that it operates under and the work and the results that it has accomplished? MR. BECKER: I would be glad to do that. I do not happen to have a folder with me today, but we have folders. It must be remembered that Group Health is an association employing physicians to assure its members all the care they need. When a member joins Group Health, Group Health Association sees to it that that member has the medical care his condition requires. We attempt to provide a comprehensive service. We want to take care of the total medical needs of the person who is a member. We do not leave it to the patient to shop around town and find the best doctor for this and the best doctor for that. Our interns and general practitioners bring to the patient the range of consultation services that that patient's condition requires. I want to make it very clear that we have a comprehensive medical service program with the assurance of care to its members. The economic barrier is removed as far as humanly possible to do so.

SENATOR MURRAY: It would seem to me that that would be a very splendid program, because the average person would find great difficulty in determining where to go for the kind of care he needed. MR. BECKER: When you have group practice you have a group of physicians working together. You have the medical needs of the patient as the focus of attention. There is no question, when a patient needs a specialist, whether or not the patient can pay for that specialist. There is no question when a patient needs an x-ray whether or not the doctor ought to ask the patient to pay for the x-ray. The doctor is not hesitant to give the patient elaborate x-rays or other diagnostic and consultation services which the patient might need, because the patient is at no additional expense.

SENATOR MURRAY: The doctor is assured of his compensation and does not have to worry about it? MR. BECKER: That is right. And he has many advantages in working with a group of physicians.

SENATOR DONNELL: You are the president of the Group Health Association, is that right? MR. BECKER: That is correct.

SENATOR DONNELL: That is not your means of livelihood, is it? MR. BECKER: That is also true. My means of livelihood is acting as consultant in medical care administration for the United States Children's Bureau of the Department of Labor.

SENATOR DONNELL: You are employed by the Children's Bureau as the assistant to Dr. Martha Eliot, who testified the day before yesterday? MR. BECKER: I am employed as a consultant of medical administrative work with the Children's Bureau. I am a principal consultant, with responsibility for a unit.

SENATOR DONNELL: Your work is with Dr. Eliot, and you work with her quite frequently? MR. BECKER: I work with Dr. Eliot quite frequently.

SENATOR DONNELL: And your income, so far as salary is concerned, comes from the United States Government Labor Department? MR. BECKER: My salary comes from the United States Government Labor Department.

SENATOR DONNELL: There is another organization in Washington known as Group Hospitalization, Incorporated, is there not? MR. BECKER: That is true.

SENATOR DONNELL: Are there several of these different health associations having as their objective the same general ideas as the Group Health Association which you represent? MR. BECKER: In Washington, D. C., Group Health Association is the only agency of that type. There are a number of others, of course, throughout the country, and I have named those in the beginning of my testimony. I have submitted comments from the officers of those associations as a part of the record.

SENATOR DONNELL: In the course of your testimony or your statement you speak of the fact, to quote your statement, "A universal application of the principle of prepaying the costs of medical care is possible only through the exercise of the government's power to tax, whether it be through the form of payroll deductions, through government taxes, or both." Have you studied the plan embodied in S. 1606 to determine whether or not in addition to the payroll deductions mentioned in S. 1050 it would be necessary to collect other government taxes to pay the expenses under S. 1606? MR. BECKER: In my interpretation of S. 1606, it would require appropriations from the general tax sources to finance the program. You will recall that title I is all of the public health and community health service type of thing, and the assumption is that those services would be financed from general tax funds as they are now at the present time.

SENATOR DONNELL: How about title II? What is your understanding there as to whether or not financing of title II would necessitate not only payroll taxes but also resort to other general taxes? MR. BECKER: Well, I would really hesitate to comment on the cost of providing the services under title II, because that requires a good deal more study than I have given to it. Title II does, however, provide for appropriations from general tax sources.

(In response to questions from Senator Donnell, Mr. Becker discussed at length his reasons for favoring a government plan supported by taxation.)

SENATOR DONNELL: Would you anticipate, if S. 1606 becomes law, that the government would enter into contracts with organizations such as the Blue Cross to furnish services for the government? MR. BECKER: I certainly feel, as I have tried to set forth the principles in my statement, that government should not contract with organizations such as the Blue Cross to perform a service which rightfully belongs to government. On the other hand, I do see a place for the Blue Cross in the event S. 1606 is passed. I can see, in communities that I know of first hand, an advantage to the hospitals in having a central organization that they could express their wishes through, and that central organization could deal with the government in regard to such matters as rates of payment, in regard to the matters of a fiscal nature, but I do not see the government saying to Blue Cross, or any other agency concerned with a business service, "We want to provide medical service to the people in this state. We will give you so much money per person in this state. We will give you so much percentage of the money that is paid out as a commission for overhead expenses" and then turning over to that organization the responsibility which is rightfully government's to carry forward the service that the law says people shall have.

. . . . . .

MR. BECKER: One comment, Senator Murray, before I leave the stand here: I hope that attention can be given to the problem of payroll deductions for federal government employees; Group Health Association and Blue Cross and other voluntary plans have found it very difficult to recruit federal employees as participants in voluntary prepayment on the same basis as industrial workers because of the fact that there is no provision for payroll deductions. If the government

would provide payroll deductions for federal employees, it would greatly facilitate our recruitment and collection of prepayment dues.

Statement of Dr. William Withers, Representing the Union for Democratic Action and the Liberal Party of New York

DR. WITHERS: Well, my full name is William Withers, and I am associate professor of economics at Queens College in the City of New York. I represent the Union for Democratic Action. I also represent the Liberal Party of the State of New York. In general, I have been a student of social security and particularly of social security financing for a number of years. I represent the Union for Democratic Action, which urges the adoption of S. 1606, the proposed "National Health Act of 1945."

(From here on Mr. Withers proceeded as if his entire statement had been prepared by a digest of the previous statements favoring S. 1606, with almost the same diction.)

(Mr. Withers opposed S. 2143).

(By questions Senator Donnell brought out that several persons formerly connected with the Union for Democratic Action had been accused of subversive activities.)

JUNE 25, 1946.

HONORABLE JAMES E. MURRAY Presiding

PRESENT: Senators Murray and Donnell.

Statement of Alton A. Linford, Chairman, Citizens' Committee to Extend Medical Care

MR. LINFORD: My name is Alton A. Linford. I am chairman of the Citizens' Committee to Extend Medical Care, Chicago. I am assistant professor at the University of Chicago in the School of Social Service Administration. I was chairman of the National Committee of the American Association of Social Workers that drafted its policy platform statement on health and medical care, which platform statement, incidentally, was adopted by the last delegate conference meeting about a month ago in Buffalo. That platform statement places the American Association of Social Workers flatly on record as supporting a national health insurance program. I was also a member of the board of directors of the White Cross, the voluntary prepayment medical care program in the city of Boston, in the years 1940 to 1942. The Citizens' Committee to Extend Medical Care wishes to express its wholehearted endorsement of the National Health Act of 1945 (S. 1606 and H. R. 4730). This committee was organized in Chicago to inform our community about health needs and to counteract the misinformation and outright misrepresentation about public health insurance emanating from the offices of the American Medical Association and its propaganda agency, the National Physician's Committee for the Extension of Medical Care, both of whose headquarters are in Chicago. In this endeavor we have tried to bring together all the organizations in this city that look with favor on the immediate enactment of a national health program. Among the organizations and groups affiliated with the committee are the Chicago chapter, American Association of Social Workers, Chicago chapter, National Lawyers Guild, Chicago chapter, Physicians Forum, Chicago Industrial Union Council C. I. O., Social Service Department Church Federation of Greater Chicago, Civic Medical Center, Illinois Industrial Union Council, Midwest chapter of Independent Citizens Committee of Arts, Sciences and Professions, Independent Voters of Illinois, Industrial Areas Foundation, Loyola University School of Social Work, Old Age Assistance Union of Illinois, Social Service Administration Club, University of Chicago, State, County and Municipal Workers of America, Chicago Local, and the United Office and Professional Workers of America.

The committee wishes to state the reasons why it favors the immediate enactment of the Wagner-Murray-Dingell bill:

1. Effective medical care is not now possible.

(Mr. Linford elaborated on medical costs.)

2. "Voluntary" prepayment plans do not provide the answer.

(Mr. Linford attacked voluntary plans.)

MR. LINFORD: For instance, the Illinois plan, according to this material that I have, will pay a cash benefit to a person for surgery varying from $5 to $50, but $50 is the maximum that will be paid for even a major operation, and I do not have to remind you that medical bills for surgery vary up into the hundreds and even thousands of dollars, and $50 off of that sort of a bill would not lighten the burden very much. An obstetric case will be paid a maximum of $50. Provision is made for payment of $3 to a doctor for a home visit and $2 for an office call or a call that the doctor makes in a hospital.

SENATOR MURRAY: What does it actually cost for an obstetric case?

MR. LINFORD: Well, I am afraid I would not be equipped to answer that. I have had experience on the paying end, Senator Murray, and I thought for my two children I was getting off at a reasonable figure for $150 just for the doctor's bill. I have heard tell of some of my friends who have paid three or four times as much, but as to how much it costs I do not know. That is a problematical figure. I wanted to emphasize, this plan will pay for doctor's visits for $3 for a home call, $2 for an office call or a hospital call, but in case of any single illness it begins to make payments only after the second visit. The first two visits are not compensated, and it emphasizes the point I make that it does not cover all the costs of medical care and is not adequate protection.

My second reason for stating that this plan is not adequate and does not afford ample protection is that, it being a cash benefit, the doctor is free to charge in addition to these fees whatever he wishes and under our system of fee for service it is certainly possible for a doctor, knowing that a patient has this amount of money, to take that into account in measuring how much the traffic will bear in deciding what his fee should be. The cost to the patients are $12 a year for a single man, $18 for a single woman and $40 for a family with two children. Now, I submit that is a rather expensive premium for a measure that pays such inadequate benefits and affords such a little bit of protection.

3. The bill is a logical and necessary extension of the social security program.

4. The bill should not only be supported but extended.

5. Senate bill 2143 would not solve the problem. This is the so-called Taft-Smith-Ball bill recently filed in the Senate.

6. The position of the bill's opponents is unsound. We are distressed with the current efforts of organized medicine to block the bill if it can or otherwise to offer limiting and crippling amendments or substitutions. The medical profession should, of course, have full responsibility for the purely professional and technical aspects of the program. The bill adequately insures professional responsibility over medical treatment itself. It must be borne in mind that the only important change that Senate bill 1606 effects in the actual practice of medicine is to provide a different method of paying for medical care; a method based on time tested principles of insurance.

(Mr. Linford attacked the Chicago Medical Society in relation to the Civic Medical Center.)

MR. LINFORD: In the light of past and current conduct of organized medicine in its treatment of voluntary prepayment plans, we can perhaps be pardoned for doubting its sincerity in its current espousal of voluntary systems. Be it noted then that it is not voluntary health insurance that the American Medical Association is sponsoring but rather its own particular brand—that which is owned, operated and completely dominated by the medical profession. As an illustration of what I mean I should like to submit for the record a copy of the enabling act which was enacted in Illinois just about a year ago. It became effective in July 1945. This is an illustration of the kind of acts that medical societies are sponsoring all over the country and in effect sets up a monopoly for organized medicine to offer voluntary prepayment services. Though it is called an "enabling act" is is in effect a disabling act, because it enables or disables every one but organized medicine to engage in this kind of medical practice.

SENATOR DONNELL: Would you read us the language that accomplishes that result?

MR. LINFORD: I shall. Section 3: "It shall be unlawful for any person, except a medical service plan corporation chartered in accordance with the provisions of this act and operating in accordance with authority from the director, to establish, maintain or operate a medical service plan or to solicit subscribers to or enter into contracts with respect to a medical service plan." That is section 3. Now, section 8, paragraph 9, contains another important restriction which I would also like to read: "Proof satisfactory to the director"—these are the conditions under which organizations will be incorporated to practice this kind of prepaid medical care, and in order to get that charter they will be incorporated, and among other things,

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they must submit "proof satisfactory to the director that, in the counties in which it is proposed that the medical service plan corporation shall operate, at least a majority of the licensed physicians residing in such counties shall have agreed to become participating physicians in association with the medical service plan corporation." I should like to point out in the city of Chicago, where the Civic Medical Center is operating, it would require the approval and participation of more than 3,000 physicians before such a plan could be put into effect, and though this law is not retroactive it is very clear if the Civic Medical Center were not now in existence it could not be incorporated, and it is obvious too that such consumer sponsored plans as the Washington, D. C., Group Health could not in Illinois be established. There are none now and they are effectively blocked by this piece of legislation. Now, one other point I should like to make, and point out, is in section 5 of this bill. Any seven persons may apply for a charter. They constitute the board of directors of such corporation. Five of them, according to this law, must be licensed physicians in the state of Illinois. This law provides that as their terms expire, and they are appointed for a four year term, I believe, they are appointed, or the vacancies are filled by the participating physicians in the system. Now that evidently was a compromise the medical society made.

I have another illustration here from the state of Massachusetts, where such a plan was enacted. The law was enacted in 1940, and the society started a plan in 1945. I am quoting here from the *New England Journal of Medicine* in a report filed by Dr. James C. McCann, who was chairman of the committee that drafted this legislation. The language of Dr. McCann, while I recognize he is speaking to fellow doctors, makes it perfectly clear that the medical society is determined to have absolute control over this thing and that the patients and the general public shall have no participation whatsoever.

. . . . . .

I should like to say parenthetically that there appears nothing in this statement that would indicate that the physicians in Massachusetts are concerned about the patients. You will notice throughout it is the protection of the interest of the doctors.

SENATOR MURRAY: It would seem that they regard the medical knowledge and training as a sort of monopoly which they have a right to cash in on.

MR. LINFORD: I am resuming the quotation: "The enabling act states that a majority of directors shall be approved by the Massachusetts Medical Society. That does not commit us one way or the other on the election of directors, so we choose to elect all of them," says Dr. McCann.

SENATOR DONNELL: Who was this gentlemen?

MR. LINFORD: Dr. James C. McCann was the chairman of the committee of the Massachusetts Medical Society that formulated this plan. He later, after it was incorporated, was elected its president. Effective consumer participation is prevented in all prepayment plans sponsored by organized medicine. These organizations are frank to admit that their sole purposes in sponsoring voluntary prepayment plans are (1) to prevent or delay government action in this field, or failing that, (2) to have effective machinery set up so that they may successfully demand the right to administer the governmental plan when it comes.

MR. LINFORD: My second point here, as to the objectives of organized medicine in setting up voluntary systems, was that—the first one being that they are trying to delay governmental action or hopefully to prevent it—they want to have effective machinery already set up so that when governmental programs go through they can demand the right to administer them. I have another quotation here from New Jersey that illustrates that very well, taken from Avnet's book "Voluntary Medical Insurance in the United States." I appreciate the fact that it is not from an offical source in the state of New Jersey. I am relying on Miss Avnet, who writes this book, published in 1944 by the Medical Administration Service in New York. This is a quotation, allegedly, from the New Jersey administration officer's remarks to a recent meeting of representatives of various medical society plans, similar to the ones I have described in Illinois. He is talking to similar men who gathered in Atlantic City for a national conference:

"We have a county that has voted not to cooperate with us. I am sure it is because they do not understand our philosophy or what we are trying to protect, the future of the practice of medicine.

"I think I speak for my board in New Jersey when I say that we don't feel these plans are going to answer the problem of medical care distribution—that is their own medical society sponsored plan.

"If we took in 50 per cent of all the people in New Jersey, that wouldn't answer it. Still, that is more people than would be interested in paying for this on a prepayment basis. But we can develop an agency—we have the legal authority to develop such an agency—and its administrative methods can be extended to take over any federal plan which comes into our state. It is for that reason that we administer the farm (Farm Security Administration) plan. I would like to see every state agency operate the farm plan because it sets a precedent. It tells the federal government 'Here is an organization that has the legal authority and the ability to administer our plans to the satisfaction of the medical profession.' This very precedent will be of tremendous value after the emergency is over if federal funds are made available for medical care, if we can bring it under our own control."

These are, of course, standard practices of entrenched groups that are implacably opposed to a program that the people are demanding. First they oppose, obstruct and delay; then when they realize that the people's demands can no longer be resisted, they come forward demanding the right to administer the program they have opposed. The Citizens' Committee to Extend Medical Care believes that the Senate, before making up its mind about the probable effectiveness of the plans of organized medicine and the suitability of organized medicine to administer or control a national health program should investigate organized medicine's current practices with respect to pioneering voluntary prepayment systems not under medical society control. We believe a good place to begin such investigation is in Chicago, where the Chicago Medical Society continues to penalize the Civic Medical Center—the only voluntary prepayment plan for physicians' services in that city.

SENATOR DONNELL: On the stationery on which the copy of your remarks is set forth there is a name that has been deleted immediately below that of yours. Whose is that? MR. LINFORD: Dr. Deborah Dauber, who was at that time chairman of the Chicago chapter of the Physicians Forum. I might add, the reason for her name being stricken from this list was that when this committee voted to ask for an investigation of the Chicago Medical Society the Physicians Forum, one of the constituent bodies, voted against it, fearing reprisals from the Chicago Medical Society, and when the committee went ahead with the request anyway Dr. Dauber had to withdraw her name.

(Senator Donnell questioned Mr. Linford about the background of the members of his organization.)

(Senator Donnell questioned Mr. Linford as to limitations on medical service under S. 1606.)

SENATOR DONNELL: The decision on the part of the doctor, as to whether or not he can take a patient today is made by him without governmental direction or limitation. That is correct, is it not? MR. LINFORD: Exactly, and he has a financial consideration. There is an incentive here for him to load up with more than he can serve, and this protection on the doctor and the patient is needed from that kind of incentive.

SENATOR DONNELL: Do you think that the medical profession has succumbed to the temptation to load themselves up so that they have been guilty of inefficient service throughout the country, Mr. Linford? MR. LINFORD: I am very reluctant to admit that some doctors are motivated by financial considerations, but many of them have assured me of that fact.

SENATOR DONNELL: You never practiced medicine yourself? MR. LINFORD: I have not.

(Senator Donnell questioned Mr. Linford on the portions of the bill relating to specialist services.)

SENATOR DONNELL: Mr. Linford, you referred to obstructing. You concluded that the medical profession has, in regard to this plan, opposed, obstructed and delayed it. That is referred to on page 9. MR. LINFORD: Yes.

SENATOR DONNELL: In respect to compulsory health insurance? MR. LINFORD: Yes, sir.

SENATOR DONNELL: I notice you use strong language about the American Medical Association. You say "we doubt the sincerity of the American Medical Association in its present campaign, which, in our opinion, is marked by distortion, untruth and vilification." You then refer, over here, and say "we can perhaps be pardoned for doubting its sincerity in its current espousal of voluntary systems." You question

strongly the motive of the American Medical Association and of organized medicine in your statement, do you not? MR. LINFORD: In their opposition to compulsory health insurance and their espousal of voluntary insurance, I do.

SENATOR DONNELL: The American Medical Association is composed of about, or in excess of, I should say, 125,000 of the physicians of this country, is it not? MR. LINFORD: I understand so.

SENATOR DONNELL: And that is by far the larger portion of the physicians in this country. That is true, is it not? MR. LINFORD: I understand so.

SENATOR DONNELL: Now, referring to this alleged distortion, untruth and vilification and lack of sincerity or questionable sincerity to which you refer, of the American Medical Association, I will ask you to state whether or not in your observation of the individual physicians that you have come in contact with generally you find that those men are characterized by distortion, untruth, vilification or absence of sincerity? MR. LINFORD: That is not what I said, Senator.

SENATOR DONNELL: No. I am asking you whether or not, as you have come in contact with Dr. Jones or Dr. Smith or Dr. Williams, whoever it may be, generally speaking, have you found those men to be in their ordinary lives and professional careers marked by distortion, untruth, vilification and absence of sincerity? MR. LINFORD: Senator, I find doctors are just the common run of people. They are good and bad; among them, in my acquaintance, and on the whole, I think admirably of them as individuals.

SENATOR MURRAY: Is there any way in which the number of men in the medical profession who do not agree with those who are in control can be determined? MR. LINFORD: Well, I suppose you could poll them, Senator, but the people who are conducting these polls—I saw a poll recently that was sent by the Chicago Medical Society to each of their physicians, and they were saying in effect the Wagner-Murray-Dingell bill is going to socialize medicine, it is going to take you over, it is going to regiment you, it is going to do all of this and that, and then they had a poll asking "Do you favor it? Well, I submit that that is not going to bring results. If you tell somebody that something is bad and then ask him does he favor it, there may be a few courageous souls who will say "Yes, we do not agree with what you have already said."

SENATOR MURRAY: The average member of the medical profession in this country has been informed throughout by the literature sent out by the National Physicians Committee? MR. LINFORD: Indeed, they have.

SENATOR MURRAY: They have flooded the country with their literature, and I have observed myself in my own state of Montana that the physicians are relying on that literature. They believe in it. They think it is absolutely reliable and accurate in its reference to this legislation that we are attempting to put through. MR. LINFORD: Exactly. My doctor friends tell me almost every day they receive communications from the National Physicians Committee through the mails, and I myself have appeared on the same platform in a debating situation with many doctors in the city of Chicago and find them repeating this stuff from the National Physicians Committee, making objections about it and admitting they have never read the bill. They are just repeating what the National Physicians Committee has told them about it.

SENATOR DONNELL: As I was undertaking to develop, the fact that in your own personal observation of the doctors in their professional capacity, and I shall add, in their personal life, generally speaking, you have found those men to be honorable, upright citizens of integrity and standing and capacity. That is true, is it not? MR. LINFORD: Yes, it is, but I have not been talking about that. I made no such insinuation. SENATOR DONNELL: I understand that.

SENATOR MURRAY: The witness has a right to make it clear on the record that he is making no attack against the honor or integrity on the part of the medical profession. MR. LINFORD: Exactly.

SENATOR MURRAY: I do not think it is fair to not permit you to make that very clear, that there is no attack intended by you on the medical profession because you are trying to support this idea of providing better service of medical care for the people of this country. I mean to say, to bring to them the full scientific knowledge of the medical profession which they are denied at the present time because of the financial barriers that exist.

SENATOR DONNELL: Well, Mr. Chairman, not only is there no effort on my part to undertake to show that Mr. Linford has in any sense criticized the medical doctors themselves individually, but I wanted him to point out as he has very clearly and very strongly and directly, that his own personal observation has been that they are upright, honorable men of integrity, and standing, and capacity and ability, so far as he has seen them individually, and he said so very clearly, and I want to emphasize that and put a peg right there. MR. LINFORD: That my point of emphasis here is that in their own field of competence I have no criticism whatever. My criticism is that they are not trained economists, and I am talking about the economics of medical care. I am an economist myself, and I have been studying this matter, and I have good reason to believe and I know, as a matter of fact, in almost no medical school do they include this question in the curriculum training of young doctors, and they are thrown out on the world unprepared for these questions, and all they get to know about it is substantially what they learn in the journals, and I am making a plea for a better education of doctors on this point, or else that they leave it to somebody else who does know about it.

SENATOR DONNELL: Mr. Linford, that is fine, that you are undertaking to tell the doctor what is right on this matter, and I am sure that you are rendering service in giving us your ideas, and we are glad to have them. I want to submit first, however, that there are many problems other than economics. You have never studied medicine, have you? MR. LINFORD: No.

SENATOR DONNELL: You have never studied surgery? MR. LINFORD: No.

SENATOR DONNELL: Have you ever studied particularly just the operation of the compulsory health insurance in Germany or England, yourself? Have you made a study of this? MR. LINFORD: I have made some study.

SENATOR DONNELL: Have you ever been there and observed it? MR. LINFORD: I was in England.

SENATOR DONNELL: You studied in England, have you? MR. LINFORD: Yes.

SENATOR DONNELL: How long were you in England and what did you do toward studying there? MR. LINFORD: I was there in 1930.

SENATOR DONNELL: 1930. What did you do towards studying the system over in England, Mr. Linford? MR. LINFORD: I do not claim to be an authority.

SENATOR DONNELL: Did you go over there for the purpose of studying that? MR. LINFORD: No. SENATOR DONNELL: How long were you there? MR. LINFORD: Two years.

SENATOR DONNELL: What were you doing there? MR. LINFORD: Studying. SENATOR DONNELL: Economics? Is that right? MR. LINFORD: Among other things. SENATOR DONNELL: What are the other things? MR. LINFORD: I do not think that has any relevance here. SENATOR DONNELL: We would like to know, if you could tell us. MR. LINFORD: I do not think it has any relevance. SENATOR DONNELL: Perhaps you may not think so, but I am asking you the question as to what other subjects you studied. MR. LINFORD: Political science, religion, various subjects. SENATOR DONNELL: Yes. Well, if you do not care to tell us what the various subjects were, I will not push that further. MR. LINFORD: Thank you.

SENATOR DONNELL: The point I am making, first, is that there are many matters involved in this bill other than economics. Economics is an important matter, but there are other things pointed out by physicians, and I respectfully submit that probably they know more about the possibilities of the deterioration in medical care and treatment than we laymen who are not members, you and I, together. The point I was making a while ago is that you have made it perfectly clear here that your own personal observation of the doctors in their personal capacity and professional capacity has been that they are honorable, upright men, and I think the point I am driving at is that suddenly they get over into the field of economics and you find their organization, the American Medical Association, which constitutes over 125,000, which I think seems to me is something over 75 per cent of the doctors, as I remember it, in this country, marked by "distortion, untruth and vilification" and subject to question as to their sincerity. Now, it is rather remarkable to me that you would find a group of men so characterized by the upright motives that are so clearly established, and which you have experienced, in their personal careers, and all of a sudden when they get over into

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the field you are expert in, economics, they immediately become characterized by distortion, untruth, vilification and lack of sincerity. That is the point I make.

MR. LINFORD: Senator, it is not a new situation. This thing has been repeated time and time again. The vested interests think they are being attacked when somebody proposes some change, and it is characteristic. It is not peculiar to the medical profession. We have seen it in education where one hundred years ago, when the battle was being made for compulsory public education, the school teachers and others used much the same language that the medical profession is using today telling us we were on the road—they did not call it communistic, they called it agrarianism. It meant the same thing. So it has been with respect to other functions which it has been necessary for the public to undertake. For instance, the supplying of water to cities and electricity and sewerage and highways and other things that could be mentioned. The vested interests have stood up and used all the kinds of language that the dictionaries offer that are "bogy" words. They know what they are doing, I think, many of them, and they are just trying to frighten people to protect what they think is a vested interest.

SENATOR MURRAY: And this struggle between the Civic Medical Center in Chicago and the American Medical Association, that condition of affairs has been exhibited there? MR. LINFORD: Exactly.

SENATOR MURRAY: And the attitude of the American Medical Association there has not been so upright and fair and reasonable as some people would like to have us think, is that not true? MR. LINFORD: I think so. And Dr. Jacques is here to tell you the details about it.

SENATOR DONNELL: Now, Mr. Linford, I observe in your membership here that you have others that are characterized by the same general mental approach to this matter. Take, for instance, the National Lawyers Guild. Mr. Linder, whom I mentioned here this morning, appeared before us with this same point about the vested interests and the hierarchy, as he called it. You have talked about the hierarchy, although you did not mention this name. I am not going to pursue this ad infinitum, but on this matter of "spoon fed" you say the doctors are being "spoon fed" by a few up at the head handing out what the doctors take, and the 125,000 doctors are taking it largely without reading it. You say they are reading what the National Committee of Physicians puts out. You say that, do you not? MR. LINFORD: Yes.

SENATOR DONNEL: And now the American Medical Association. You are familiar with the type of government it has, are you not, and the fact that it has a House of Delegates composed of members all over the United States, has it not? MR. LINFORD: Yes, Senator.

SENATOR DONNELL: Physicians who are just ordinary run of physicians who have been active and outstanding, perhaps, in point of ability and interest, integrity, who have come together, and they express the opinion of the American Medical Association, do they not? Is that right? MR. LINFORD: Senator, I am not an expert on the government of organized medicine, but I will say this, in answer to your question: I have seen ballots of various medical societies in which doctors have been asked to vote for their officers, and there were names of only one officer for each position submitted to them. It is a one party election. And they had no choice. I might just cite that we have had one party elections in certain countries in Europe and Asia where the heads of those governments have been elected by an overwhelming majority, but the people had no choice. They had one party to vote for.

SENATOR DONNELL: You are not telling us that the American Medical Association only permits one person to be voted on in the state of Illinois, for instance, as its member of the House of Delegates? You are not telling us that, are you? MR. LINFORD: I am saying Senator, I have seen ballots in which there was no choice offered to the doctors. There was the name of one officer, one person submitted for each office. With a notation at the head of each office, "Vote for one," and there was only one name to vote for.

SENATOR DONNELL: You are not telling us that is the general method under which the American Medical Association operates, are you? MR. LINFORD: I am not acquainted with the general method. Since you asked me the question, I can only speak from what I have seen.

SENATOR DONNELL: Yes. But I say, and you have said, you are not acquainted with the general method prevailing in the American Medical Association of the choice of its House of Delegates? I am correct in that, am I not? MR. LINFORD: Yes.

SENATOR MURRAY: When you refer to a "one party system," you mean that the American Medical Association is the only organization speaking for the medical profession and that there are no two setups in this country, one American Medical Association and the other an independent medical profession where you can have representation from either side? MR. LINFORD: I certainly do, and I have read reports that have been made to the House of Delegates of the American Medical Association, in which there was discussion, and apparently difference of opinion, and they tried to iron out all of that in committees and present a united front. It is always unanimous, if you notice. And that, I think, is enough itself to make one suspicious.

SENATOR DONNELL: I am not prepared to accept the statement that the action of the American Medical Association is always unanimous. I do not know about that, but I know the American Bar Association, which has a similar type of organization, a house of delegates, taken by the way from the American Medical Association plan, very largely, there are frequently violent differences of opinion manifested on the floor, and sometimes in minority reports, I think. However, you have never made a study of the actual operation of the House of Delegates of the American Medical Association? I am right in that, am I not, Mr. Linford? MR. LINFORD: Yes, sir.

Statement of Dr. Lawrence Jacques, Civic Medical Center, Chicago

DR. LAWRENCE JACQUES: I am a physician. My practice is limited to general surgery. I am a member of the executive committee of the Civic Medical Center and the surgeon of the Civic Medical Center, 20 East Jackson Boulevard, Chicago. I am a graduate of the University of Chicago and of Rush Medical College, class of 1924. I interned at Cook County Hospital in Chicago. I spent two years after that doing investigative work in the field of physiology and pathology and became a full time assistant of a Chicago surgeon. I spent most of the year 1928 in Europe doing postgraduate work in surgery. I was formerly on the surgical staff of the Cook County Hospital, Michael Reese Hospital and Wesley Hospital, and I taught surgery in the Department of Surgery at Northwestern University Medical School for about eight years. I may say that I am the son of a doctor and that I have been reared in the atmosphere of medical practice since infancy.

SENATOR MURRAY: Are you a member of the Amercian Medical Association? DR. JACQUES: I am not, sir. The following statement in support of the national health bill is submitted to the Committee on Education and Labor at the request of and with the endorsement of the Chicago Citizens' Committee to Extend Medical Care. It is offered as a case history of an early effort in voluntary group practice and prepayment and to illustrate the difficulties and complications encountered by such a project under present conditions. It is based on the eleven year experience of the Civic Medical Center of Chicago with group practice and prepaid medical care. During this period I have been surgeon and a member of the executive committee of that organization.

Our experience has demonstrated two points relevant to the considerations involved in the national health bill:

1. We have found that, while the prepayment principle is practicable and works clearly to the advantage of both physician and patient, a private voluntary organization under existing conditions cannot apply this principle on an adequate scale.

2. The record of our dealings with organized medicine, as represented by the Chicago Medical Society, raises some question as to the readiness of the society to set up voluntary plans of its own.

The Civic Medical Center is a partnership established as a group clinic in Chicago in May 1935. Its staff today consists of five internists (general men) and nine specialists, together with four dentists and an optometrist jointly utilizing the personnel and equipment necessary for diagnosis and treatment. It also maintains a pharmacy, an optical shop and a dental laboratory. During the past eight years the center has had in operation a prepayment plan. Essentially this plan provides full office and hospital care including both diagnostic procedures and treatment by the staff of the center on a fixed monthly basis. House calls are made on a reduced fee scale. Individuals, couples or families with dependents may be covered.

About 30 per cent of our patients subscribe to the prepayment plan, while the rest are on a fee for service basis. This circumstance affords a clearcut opportunity, though on a small scale, for comparing the two methods of payment.

Our practical experience with prepaid medical care has fully convinced us of the soundness of the prepayment principle. In the first place, prepayment leads to a fuller and freer utilization of our facilities. Diagnostic procedures are carried out, consultations held, treatment advised without regard to expense. This is particularly important when the prepayment principle is applied to group practice, where fee for service patients may find that consultation with several doctors at each visit, which is not infrequently necessary, may involve prohibitive costs. Our statistics, compiled during an eight year period, show that a prepayment plan patient will utilize our services twice as frequently as fee for service patients during the first year of membership and that he will continue to make use of them about 60 per cent more than fee patients thereafter. This freer utilization of services involves more frequent examinations, earlier examinations and periodic checkups in the absence of complaints and thus leads to the practice of what is called "preventive medicine." Advice is more readily accepted because there can be no question as to its motivation—a factor which, unfortunately, can enter into fee for service practice. Claims that prepayment disturbs the physician-patient relationship are completely refuted by our experience. The fact is that such relationships are definitely enhanced, since they are not disturbed by financial considerations. Nor are we disturbed by the potoential danger that patients will abuse their privileges under the prepayment plan by demanding unnecessary and unreasonable services. The danger exists—but in our experience it has been minimal—partly, perhaps, because we have been fortunate in the kind of patients who have seen fit to subscribe to our plan. When abuses do occur, however, they can usually be corrected by simple measures of education and discipline.

We must also submit that a voluntary plan such as ours, with all of its advantages to doctor and patient alike, has serious limitations. At the very best we cannot meet the needs of more than a small group of the population, although except for the upper income crust the need for some form of prepayment is universal. We have tried but have been unable to devise a plan satisfactory to families at the lower income levels (under $1,200 annually), such as the residents of a federal housing project. They cannot have adequate coverage without subsidization, and we feel that the form of subsidization to be adopted for them must avoid the stigma of pauperism and charity now attendant on the medical care of the indigent. Neither can we offer a sufficiently attractive plan to families of the next income group ($1,200 to $2,500). Families at this income level, in our experience, are not inclined voluntarily to budget for medical care, although some of them, by sacrificing certain comforts and luxuries, might be in a financial position to do so. Thus we, as a voluntary group, cannot reach those sections of the population whose need for the prepayment principle is greatest. Finally, we cannot, under present conditions, reach a sufficient number of people in the group that would be likely to subscribe to a prepayment plan such as ours if they knew of its existence (families with incomes averaging $3,000). The difficulties to be experienced in introducing a voluntary organization like the Civic Medical Center in this community may best be illustrated by a frank account of our history since the founding of the center, with particular emphasis on our relationship with the local medical society.

In 1933, in the depths of the depression, the problem of the distribution of medical care had become acute for doctors and patients. In an attempt to solve this problem a group of reputable Chicago physicians, with the aid of a group of men of high standing in business and professional life, set up a low cost, fee for service clinic based on the principles of group practice and large scale attendance secured by public advertising. One of the directors of this group was at the time of joining a member of the council of the Chicago Medical Society. The general surgery was being done (in an unofficial and unpublicized capacity) by a man who had several years previously been president of the Chicago Medical Society. Among its chief sponsors were a former president, for several successive terms, of the Chicago Board of Education and the chief of the urologic department of one of our great medical schools. The clinic was organized as a corporation and called the United Medical Service, Inc. After two years of successful practice the organization was disrupted through a controversy over issues of policy and control.

SENATOR MURRAY: Doctor, were you a member of that? DR. JACQUES: Yes. I was surgeon for that group.

SENATOR MURRAY: You are one of those who helped organize it? DR. JACQUES: No, I was not. I came in about fourteen months after it was in existence. I was with it for a year. I took the place of the gentleman who had been president of the Chicago Medical Society and was doing the surgery at that time.

SENATOR MURRAY: You may proceed.

DR. JACQUES: The Civic Medical Center was established as a partnership in 1935 by a group of doctors who withdrew in a body from the United Medical Service. For the first ten months of its existence, with considerable reluctance, it continued the policy of institutional advertising because it was felt that the clinic could not survive unless it was brought actively to the attention of the public. After ten months this policy was discontinued, the last notice appearing March 1, 1936, more than ten years ago. This change in policy was made partly in deference to the accepted ethical standards of the medical society but largely because of our own distaste for the method. We agree with organized medicine that advertising and low fees do not fundamentally attack the problem of distribution, although these practices had been initiated out of a single conviction that they might do so and seemed justifiable as an experiment during a critical period.

Two years later (1937) we adopted a prepayment plan in a further effort to make our type of medical care more available. Much of the original impetus leading to its adoption came from one of our patients who was then president of the Illinois Credit Unions and who had observed that a very large proportion of the loans made by the credit unions went to defer the costs of illness. He felt that a group clinic offering a prepayment plan might be the answer for many of those who were finding it necessary to borrow money to meet their medical bills.

All of our physicians (except those who had never been members) had been expelled from the medical society because of their connection with the United Medical Service. Thus the staff of the Civic Medical Center, at the time of its inception, consisted entirely of men who were not members of the society. In 1939, four years after the founding of the center, I applied for membership in the Chicago Medical Society. The application was rejected without comment. There ensued a series of applications and negotiations between the center and the society, which still continue. The highlights of these negotiations will be outlined here, but it may be stated at this point that now, in our eleventh year, the hostility of the society remains unabated and no member of our staff has been admitted.

Second and third applications were made in 1940 and 1942, and these were again rejected without statement of cause. In 1943 four members of our staff, two of whom were with the armed forces, made joint applications. These applications were accompanied with a letter stating our position. At the same time we conferred with the president of the society and put in his hands a long and detailed statement of our case so that there might be no confusion as to the facts. We then conferred with the membership committee, which, we were told, has the function of deciding on applications.

We found some members of that committee uncertain not only as to the issues involved but even as to our identity, although we had already been three times rejected. We were told after a rather heated conference that while the membership committee usually passed on applications our situation was "too hot" for them—that the matter would have to be referred to the council of the society. An immediate plea was made to appear before the council to present our case directly so that there would be no confusion of fact, but this was rejected.

We learned from members of the council that at subsequent meetings gross misconceptions concerning our identity and general status existed, but our pleas to appear directly, or at least to be present at these hearings to supply relevant data were repeatedly denied.

We pointed out the need for such printed information, particularly in connection with the prepayment plan, but offered to keep it off of our reception room tables if the society so preferred it. We then reaffirmed our belief in group practice and prepayment, with the statement that these were the goals toward which medical practice was advancing and that we could not and would not abandon either. At the council meeting which took place on that day we were again rejected (including both of our men in military service) again without a council hearing, and with no statement of cause.

SENATOR MURRAY: Would you, some time in the course of your statement, explain why it was that you were so

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anxious to have them accept your people as members of the medical society? DR. JACQUES: I state that two or three pages down the line. We then investigated the question of appealing this decision of the council and learned that no mechanism of any kind exists in either the state or the national organization for appealing a denial of membership in a local society.

In October 1944, almost one year later, we again conferred with the membership committee. The attitude of its members seemed somewhat friendlier than it had been on previous occasions. We were told at this conference that opinion against us was by no means unanimous and that some members of the council were even saying that "what we were doing might be a good thing." We were advised at this time to ask directly for a council hearing, addressing our request to the president of the council. We were also assured that there were ample precedents for such a request; but our plea for a hearing made on the basis of this advice was completely ignored. In a final attempt to bring at least a few salient facts directly to the council, a letter stating our case was mailed to each of the approximately seventy members of the council. This letter brought no response of any kind. In April 1945 one of our staff members who had joined us only two years previously made application for membership. This application was accompanied with a letter which was again mailed to each member of the council. I should like to read that letter. It is to Dr. William S. Bougher, Chairman, Membership Committee, Chicago Medical Society, dated April 7, 1945:

> This letter accompanies the enclosed application for membership in order to further clarify my status. Since the membership committee has intimated that final consideration of applications by members of the Civic Medical Center rests with the council as a whole, copies of this letter are being sent to all the members of the council.
>
> I graduated from Northwestern University Medical School in 1930 and finished my internship at Cook County Hospital in 1931. I joined the Chicago Medical Society in 1933. In 1935 I left Chicago to serve as a medical officer in the Veterans Administration Facility, Knoxville, Iowa, and two years later discontinued my membership in the society after deciding to remain in the government service.
>
> In February 1943 I resigned from the government service to join the medical staff of the Civic Medical Center in Chicago. This association was made after careful study and in full confidence that the Civic Medical Center was practicing and would continue to practice medicine in strict conformity with the medical standards and ethics set up by the Chicago Medical Society. During the two years of my association I have never been disappointed in this confidence.
>
> I have submitted myself for three examinations by the army but have finally been given an honorable discharge from the Reserve Corps for medical reasons.
>
> I hope you will find it possible to act favorably on this application.

Up to the present time, fourteen months later, there has been no response to this letter, and no action of any kind has been taken on the application.

A letter addressed a few months ago to the secretary of the society by a member in good standing of the society, and a former president of one of its branches, recommending us for membership, was answered with a brusque statement that if these men wished to join the Chicago Medical Society they were free to apply for membership. On May 17, 1946 a committee of patients met with representatives of the Chicago Medical Society in the society offices. Following this meeting two members of our staff reapplied for membership. As far as we can learn, no action was taken on these applications at the council meeting which took place on June 6, 1946. This committee of patients presented to the group representing the Chicago Medical Society a written statement, which I would like to make a part of the record. We have been told in a telephone conversation with Dr. Furey, secretary of the society, that no mention was made of the conference with our patients' committee at the council meeting but that the matter had been taken up with the trustees of the society. A copy of the letter received by Wayne Leys, Ph.D., chairman of the patients' committee, is attached.

Section III. Effects of nonmembership in local medical society:

The handicaps of nonmembership in the local medical society are serious and far reaching and in effect amount to a partial revocation of licensure to practice medicine:

1. Partly because of a resolution passed by the House of Delegates of the American Medical Association to the effect that staffs and hospitals accredited for intern training should be limited to members of their local medical societies, we are allowed to practice in only two hospitals in the Chicago area. In neither of these hospitals are we allowed to enjoy full staff privileges. The seriousness of this limitation is such as to jeopardize constantly our right to practice in these hospitals at all. For example, in one of the hospitals which had been accepting our patients a ruling has just been made that the surgical cases may not be scheduled more than two days in advance unless the physician is a full staff member. The effect of this ruling, made because of the crowding incident on the ending of the war, is that the schedule is practically always closed when non-staff members attempt to list a case. It seems more than probable that we lack full staff membership only because of our nonmembership in the society.

Furthermore, both of these hospitals are so located that thousands of our patients must travel 10 or fifteen miles within metropolitan Chicago to get to them, while there are literally dozens of hospitals which are passed enroute, often only several blocks from the patient's homes. This lack of accessibility to hospital facilities, with its attendant dangers and uncertainties, has been a major obstacle to our growth.

2. We cannot be on the staff of any teaching or research institution, so that we are greatly hampered in our continued professional development.

3. We are not permitted to contribute our share in the case of the indigent in hospital wards and dispensaries.

4. We cannot be accredited by the various specialty boards because membership in the local medical society is a condition of eligibility. This is an increasingly serious handicap, since many hospitals are making certification by a specialty board an absolute condition for practicing within those hospitals.

5. As far as we can learn, no insurance company in the United States will issue malpractice policies to our men—although there has not been a single suit filed against us since our establishment—simply because we are not members of the society.

SENATOR MURRAY: Tell me this: as members of the society, do the members receive lower rates of insurance in some insurance companies? DR. JACQUES: Well, it is not a question of a lower rate. Nonmembers simply will not be insured at all. I think there is a standard rate for those who are eligible for insurance. Eligibility means society membership. We do have now practice insurance with Lloyd's of London. That policy was issued to us many years ago.

SENATOR MURRAY: You mean that an insurance company would not accept a nonmember at all? DR. JACQUES: Yes, sir. Would not accept a nonmember at all.

SENATOR MURRAY: Has that ever been investigated by the Department of Justice? DR. JACQUES: I do not know. I think it might be of interest to that department. It is significant, incidentally, that the premiums which we pay Lloyd's have been decreased by the insurer from $50 to $22 per man during this period on the basis of the complete absence of any claims against us so that we would be, I think, regarded as an insurable risk except for our exclusion from the society.

6. During the war our men were disqualified for service as medical officers in the navy because application to serve in this capacity was not considered unless accompanied with a letter certifying that the applicant was a member in good standing of the society. The other qualifications of members of our staff who entered the service may be judged by the fact that three attained majorities and one a captaincy in the Army Medical Corps. One man, who still remains in the army, has recently been made chief of medical services at the regional station hospital at Fort Sheridan, Ill. This man has just been discharged.

7. There are at least five states with which Illinois has reciprocity in the matter of medical licensure in which society membership is a requirement for reciprocal licensure. In several other states lack of membership is regarded as putting under question the moral and ethical character of the applicant.

8. It has recently been announced in the local papers that a plan is now being studied in Washington whereby Illinois veterans with service connected disabilities will soon be able to get medical treatment at the expense of the Veterans Administration from the member physicians of the Illinois State Medical Society. The latter condition would exclude our own veterans who have returned or are about to return from the armed services from rendering services to other veterans on this basis. This plan, as far as I know, is still in the stage of negotiation, although it has been put through in some states.

Because of these severe restrictions, we have the greatest difficulty in making adequate replacements or additions to our professional personnel. Other men hesitate to take part time positions with us because of the fear of punishment or reprisal by the society. Besides, we are stigmatized in the eyes of large

numbers of potential patients, many of whom have private physicians who have taken every opportunity to discredit us, often with considerable indifference to or ignorance of the facts, a form of activity which does not seem to conflict with the ethical standards of some society members.

SUMMARY

Throughout our negotiations with the society, the council has constituted itself as judge, jury and prosecution, with powers of conviction and punishment comparable to those of a court of law. But it has assumed none of the responsibilities and obligations inherent in legal procedure. Rather, it adopts an attitude such as might be appropriate for a select country club or a secret fraternal order. The proceedings concerning us are veiled in an atmosphere of petty secrecy as if they had no serious and destructive influence on the professional work of fifteen reputable physicians whose honesty or competence has not come into question or on the health and well-being of some 60,000 patients who have, during the last eleven years, entrusted themselves to our care. In the words of a member of the membership committee, we are "not supposed to know" what transpires at these meetings. By not permitting us even to state our case directly to those responsible for our rejection, it is denying us what would seem to be a fundamental right of citizenship. By denying us membership, it has deprived us of the basic right to give our patients the best care of which we are capable according to our individual gifts under the most favorable conditions available in this community—rights which would seem to be implicit in our licensure to practice medicine in the state of Illinois.

And what, indeed, are the reasons for our rejection? It may be claimed that we are excluded because we advertised for ten months eleven years ago. But at least eight men who were with us during that period, and who have since left us, have been readmitted to the society. Furthermore, several men who joined the Civic Medical Center staff years after the policy of advertising had been dropped, and only on the stipulation that it would never under any circumstances be resumed, have also been refused admission.

The evidence at hand suggests, rather, that we are being excluded because of our prepayment plan. It is significant that it is most difficult to get definite commitments on this point from those in a position of authority in the society. The fact is that, while the society expresses approval of the idea of prepayment, it continues to exclude staff members of the only existing voluntary medical organization in this community carrying that principle into effect. Perhaps our prepayment plan is offensive because it is not open to all members of the profession. But any doctor in this community, or any group of doctors, has been free (except for the opposition of the society!) during all these years to adopt a similar plan. A more enlightened attitude on the part of the society would have made unnecessary independent experimentation such as ours, with its attendant difficulties and sacrifice. It may be pointed out here that our experience has been duplicated by numerous organizations, including the Group Health Association in Washington, D. C., which were excluded and in some instances still continue to be excluded from society membership on the issue of prepayment alone. The local society does not seem to be influenced by the implications of the recent Supreme Court decision on the Group Health Association case.

Whatever the alleged reasons for our exclusion may be, we are led by the aforementioned considerations to the conviction that, to the extent to which they concern themselves at all with our problems, it is the desire of the group of men now in control of the Chicago Medical Society to destroy the Civic Medical Center.

CONCLUSIONS

1. Our experience during an eleven year period clearly supports group practice as a means of supplying medical care and demonstrates the validity of prepayment as a method of furthering the adequate distribution of such services.

2. In view of the local society's record in its dealings with the Civic Medical Center, we regard with skepticism the advocacy now being given by the society to the idea of prepayment. It is our impression that their present objective is simply to head off the national health act. Furthermore, we question its readiness to apply independently the principle of prepayment to the distribution of a vital service affecting the health of millions of people. The need for the active participation of the medical profession at large in any workable plan is obvious, but it would seem neither wise nor reasonable to place full and independent control over such a plan in the hands of those who have demonstrated so narrow an outlook on these matters.

3. On the basis of these considerations, I am led, with some reluctance, to the conclusion that the task at hand can be accomplished only within the outlines of a comprehensive, centrally integrated plan under governmental control and supervision.

SENATOR MURRAY: Do you know how many groups have cases like this that exist in the country? DR. JACQUES: To my best knowledge, the group in Elk City is still not admitted, Dr. Shadid's group and Dr. Mahlon Ogden's group in Little Rock, Ark. I think there are other groups, but I have no late information.

SENATOR MURRAY: Were you familiar with the Washington case, the Group Health Association here? DR. JACQUES: I was familiar to the extent that I followed the case as well as I could. I followed the transcripts as they were published in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

SENATOR MURRAY: Well, I am not familiar with the Washington case, but the facts in your case seem to me to be pretty strong and probably are just as strong as they were in the Washington case, even stronger.

DR. JACQUES: I should feel that they have definite strength, as far as the facts themselves are concerned.

There are differences between the Washington group and our own. The Washington group is a consumer organization employing a group of doctors to render medical service. We are a producers organization. It was the consumers in the Washington case who instituted action.

SENATOR MURRAY: But the acts on the part of the medical society and the American Medical Association in attempting to suppress it and prevent it from operating in the Washington case are somewhat similar? DR. JACQUES: Yes. I would say they are analogous, perhaps, not identical. I am sure they are not identical.

[Because of the absence of Senator Donnell there was no cross examination.]

(To be continued)

Coming Medical Meetings

Annual Congress on Industrial Health, Boston, Sept. 30-Oct. 3. Dr. Carl M. Peterson, 535 N. Dearborn St., Chicago 10, Secretary.

American Association of Obstetricians, Gynecologists and Abdominal Surgeons, Hot Springs, Va., Sept. 5-7. Dr. James R. Bloss, 418 Eleventh St., Huntington 1, W. Va., Secretary.

American Association on Mental Deficiency, Montreal, Canada, Oct. 2-4. Dr. Neil A. Dayton, Mansfield Depot, Connecticut, Secretary.

American Congress of Physical Medicine, New York, Sept. 4-7. Dr. Richard Kovacs, 2 East 88th St., New York 28, Secretary.

American Diabetes Association, Toronto, Canada, Sept. 16-18. Dr. Cecil Striker, 630 Vine St., Cincinnati 2, Secretary.

American Hospital Association, Philadelphia, Sept. 30-Oct. 3. Mr. George P. Bugbee, 18 E. Division St., Chicago, Executive Secretary.

American Roentgen Ray Society, Cincinnati, Sept. 17-20. Dr. H. Dabney Kerr, University Hospital, Iowa City, Iowa, Secretary.

Association of Military Surgeons of the United States, Detroit, Oct. 9-11. Col. James M. Phalen, Army Medical Museum, Washington 25, D. C., Secretary.

Colorado State Medical Society, Estes Park, Sept. 11-14. Mr. Harvey T. Sethman, 1612 Tremont Place, Denver 2, Executive Secretary.

District of Columbia, Medical Society of the, Washington, Sept. 30-Oct. 2. Mr. Theodore Wiprud, 1718 M Street N. W., Washington 6, Secretary.

Kentucky State Medical Association, Paducah, Sept. 30-Oct. 3. Dr. P. E. Blackerby, 620 S. Third St., Louisville, Secretary.

Michigan State Medical Society, Detroit, Sept. 25-27. Dr. L. Fernald Foster, 2020 Olds Tower, Lansing 8, Secretary.

Mississippi Valley Medical Society, St. Louis, Sept. 25-27. Dr. Harold Swanberg, 510 Maine St., Quincy, Ill., Secretary.

National Medical Association, Louisville, Ky., Aug. 20-23. Dr. John T. Givens, 1108 Church St., Norfolk 10, Va., Secretary.

Nevada State Medical Association, Las Vegas, Oct. 4-5. Dr. Moreton J. Thorpe, 17 N. Virginia St., Reno, Secretary.

Oregon State Medical Society, Gearhart, Sept. 26-28. Dr. Thomas S. Saunders, 1020 S.W. Taylor St., Portland 5, Secretary.

Pennsylvania, Medical Society of the State of, Philadelphia, Oct. 7-10. Dr. Walter F. Donaldson, 500 Penn Ave., Pittsburgh 22, Secretary.

Southern Psychiatric Association, Richmond, Va., Oct. 7-8. Dr. Newdigate M. Owensby, 384 Peachtree St. N.E., Atlanta, Ga., Secretary.

Utah State Medical Association, Salt Lake City, Aug. 29-31. Dr. D. G. Edmunds, 610 McIntyre Bldg., Salt Lake City, Secretary.

Vermont State Medical Society, Burlington, Oct. 2-4. Dr. Benjamin F. Cook, 48 N. Main St., Rutland, Secretary.

Washington State Medical Association, Spokane, Aug. 19-21. Dr. A. J. Bowles, 218 Cobb Bldg., Seattle, Secretary.

Wisconsin, State Medical Society of, Milwaukee, Oct. 7-9. Mr. Charles H. Crownhart, 110 E. Main St., Madison 3, Secretary.

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Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION AND PUBLIC HEALTH.)

CALIFORNIA

Examinations for Health Officers.—The California State Department of Public Health announces an examination for public health medical officer grade I and public health medical officer grade II. For grade I the beginning salary is $4,860, plus travel, with annual increments to a maximum of $5,820. Individuals qualifying and appointed are eligible for formal public health training. For grade II the initial salary is $5,460, plus travel, with an annual increment to a maximum of $6,660. Persons who qualify will be appointed to various bureaus and divisions of the state department to perform public health work. California medical licensure is necessary before appointment, but the examination is open on a nationwide basis and licensure is not necessary to qualify. Interested and qualified applicants should write to the Director, California State Department of Public Health, 760 Market Street, San Francisco, for further information and application form.

ILLINOIS

Richard Young Goes to Utah.—Dr. Richard H. Young, physician to Northwestern University and director of student health, Evanston, has been appointed dean of the University of Utah School of Medicine, Salt Lake City, effective September 15. Dr. Young, who graduated at Northwestern medical school in 1930, serves currently on the faculty as assistant professor of medicine.

Chicago

Tuberculosis Meeting.—Dr. Jay A. Myers, Minneapolis, will address the Chicago Tuberculosis Society at the Bismarck Hotel, October 24, on "Early Tuberculosis." Dr. Hugo T. Cutrera is secretary-treasurer of the society.

Institute for Occupational Therapists. — The first refresher institute for occupational therapists was held at the University of Illinois College of Medicine, August 15-16. Sessions on orthopedics and tuberculosis will run concurrently, and attendance will be limited to therapists working in these fields.

Warren Cole Acting Dean at Illinois.—Dr. Warren H. Cole is serving as acting dean of the University of Illinois College of Medicine and executive dean of the Chicago Colleges until Dr. Andrew C. Ivy assumes his position as vice president, September 1 (THE JOURNAL, July 13, p. 928). Dr. Raymond B. Allen has resigned the administrative position to become president of the University of Washington.

William Wartman Named Professor of Pathology.—Dr. William B. Wartman, who served as a lieutenant colonel in the medical corps, A. U. S., during the war, has been appointed Morrison professor of pathology and chairman of that department in the Northwestern University Medical School, it was announced August 5. Dr. Wartman, who graduated at the University of Pennsylvania School of Medicine, Philadelphia, in 1932, served on the staff of Western Reserve University School of Medicine, Cleveland, in 1935-1941, becoming pathologist in charge of the university hospitals in 1939.

IOWA

Experimental Plan for Faculty Compensation.—The Iowa State Board of Education has approved a two year experimental plan for faculty compensation in the State University of Iowa College of Medicine, Iowa City, according to the Iowa City *Citizen* of July 25. The plan was recommended by a faculty committee after several months' study: Dr. Harold D. Kerr, head of radiology; Dr. Everett D. Plass, head of obstetrics and gynecology; Dr. Nathaniel G. Alcock, head of urology; Dr. Frank R. Peterson, head of surgery; Dr. Placidus J. Leinfelder, ophthalmology, and Dr. Jacques S. Gottlieb, psychiatry. A salary schedule was adopted for the various professional ranks in medicine. Private clinical practice was authorized, with percentage limits based on individual salaries. Fees from private patients will be credited to the clinical department rendering the service. From this income the faculty doctors will be paid the additional stipulated percentage of their basic salaries. Funds remaining will be used for departmental equipment and scientific programs. Professors desiring to serve on a full time basis will, as in the past, be permitted to do so. Preliminary steps were put into effect immediately, the report stated, and the plan will be in full force at the beginning of the new biennium, July 1, 1947. After a two year trial the plan will be reviewed by the university authorities in consultation with the faculty of medicine. Virgil M. Hancher, L.H.D., president of the State University of Iowa, stated that it is not the practice of colleges and universities to announce their budget salaries, but it is hoped that the new schedule, starting at the rank of assistant professor, will enable the school to maintain "longer faculty tenure." A plan for retirement compensation has been included in the program.

LOUISIANA

New State Health Officer.—Dr. Waldo L. Treuting, New Orleans, on July 23 was named state health officer by Governor J. H. Davis. Dr. Treuting succeeds Dr. David Brown, who failed to receive senate confirmation at the recent session of the legislature. Dr. Treuting's appointment does not come up for senate confirmation until the 1948 session of the legislature, according to newspaper reports. Dr. Treuting graduated at Tulane University of Louisiana School of Medicine, New Orleans, in 1934. He has been director of the division of preventable medicine of the state board.

Regulation Amended for Cosmetics Containing Estrogen.—The Louisiana Department of Health, July 12, adopted the following regulations for the manufacture and sale of cosmetic preparations:

> No cosmetic or beauty preparation containing as one of its ingredients estrogenic hormone, any of its chemical derivatives or any synthetic chemical product possessing properties similar to those in estrogenic hormone, may be manufactured, processed, packed, sold or distributed in Louisiana unless its label bears adequate directions for use and its label bears the number of international units per ounce of such ingredient.

The board of health also took action to repeal and rescind the following regulation, which was adopted January 11:

> The manufacture, processing, packing, sale or distribution of any cosmetic or beauty preparation containing estrogenic hormone, any of its chemical derivatives, or any synthetic chemical product possessing properties similar to estrogenic hormone is hereby prohibited in Louisiana.

NEW YORK

First Diphtheria Death Since 1934.—The first death from diphtheria since 1934 in Rochester was reported July 22. The death was of a child aged 22 months. The father, an army man, had been compelled to move his family several times, and the child had not been immunized.

New York City

Robert Boggs Named Assistant Dean. — Dr. Robert Boggs, assistant professor of anatomy, New York University College of Medicine, has been named assistant dean of the college, it was announced August 7. During the war Dr. Boggs was medical officer of the U. S. S. *Wichita* in the Pacific and was also stationed at Columbia University and at St. Albans Naval Hospital. Following his release from active duty in the navy on Sept. 1, 1945 Dr. Boggs joined the medical faculty of New York University. He graduated at McGill University Faculty of Medicine, Montreal, in 1933.

OHIO

Hospital News.—Walter and Edgar Weil have given a sum of money to the Mount Sinai Hospital, Cleveland, to establish a blood bank in honor of their father, Samuel Weil. Mr. Walter Weil is a member of the board of trustees and chairman of the research committee at Mount Sinai.

Parke Smith Named Professor of Surgery.—Dr. Parke G. Smith, Cincinnati, has been appointed professor of surgery in the urologic division of the University of Cincinnati College of Medicine and director of urology in the department of surgery, Cincinnati General Hospital. He succeeds Dr. Gordon F. McKim, resigned.

Library Named for Physician.—A new medical library at Mansfield General Hospital, Mansfield, has been named the Frank H. Maxwell Memorial Library in honor of the only physician in Richland County to lose his life in World War II. The library was made possible with funds furnished by the medical staff. Dr. Maxwell's obituary appeared in THE JOURNAL, May 26, 1945, page 307.

Samuel Saslaw Wins Borden Award. — Dr. Samuel Saslaw received the first annual Borden Undergraduate Research Award of $500 on the unanimous recommendation of the research committee of the Ohio State University Col-

lege of Medicine, Columbus. The annual award of $500 for excellence of research has been established at twenty-two medical schools in the country in an effort to assist the schools in developing a greater interest among undergraduates in medical research (THE JOURNAL, Dec. 22, 1945, p. 1218). Dr. Saslaw's special field of investigation covered the important problems of cellular and humoral immunity as they involve both viral and bacterial agents of infectious disease.

Grant for Medical Research.—Franz T. Stone, Williamsville, N. Y., has given $10,000 to Ohio State University for continued medical research in honor of the ninety-first birthday of his father, Julius F. Stone, now living in California, who is chairman emeritus of Ohio State's board of trustees. The 1946 gift is in addition to the $10,000 which Mr. Stone gave last year on his father's ninetieth birthday to establish the Julius F. Stone medical research fellowships in physical medicine and in medical research to be conducted in connection with the cyclotron at the university (THE JOURNAL, Sept. 8, 1945, p. 141). In addition Mr. Stone gave new funds to the $20,000 Julius F. Stone Foundation, which also finances medical research.

Personal.—Dr. Tom D. Spies, associate professor of medicine, University of Cincinnati College of Medicine, is one of a group of scientists chosen to spend six to eight weeks lecturing and visiting in Switzerland this year. The trip is sponsored by the American Swiss Foundation for Scientific Exchange, Inc., Montclair, N. J., a newly organized group interested in restoring contact between the United States and Switzerland in medicine and the natural sciences. The foundation also will bring prominent Swiss scientists to this country.——Dr. and Mrs. William B. Robinson, Mount Gilead, observed their golden wedding anniversary, July 1.——Dr. David M. Creamer, Bellaire, has been appointed a member of the Bellaire board of education.——Dr. Joseph E. Duty, Toledo, has been appointed superintendent of the Toledo State Hospital, Toledo, succeeding Dr. Ora O. Fordyce.

WEST VIRGINIA

Certification of Laboratory Technicians.—Qualified laboratory technicians will hereafter be certified by the state health department without regard to their association with any particular laboratory. Heretofore, when a certified technician in sole charge of an approved laboratory accepted employment elsewhere the laboratory lost its approved status, which could not be restored until the new technician had completed approximately a week's training at the state hygiene laboratory or until annual tests had been satisfactorily completed. Qualified technicians will now be eligible for immediate certification if they are employed in a laboratory already approved, and a laboratory which loses the services of a technician will retain its approved status and will be permitted to resume making serologic examinations required by the premarital and prenatal laws just as soon as another certified technician is placed in charge. These new regulations were adopted by the public health council at a meeting held at Charleston July 15 and followed a series of conferences between Dr. Kathryn Cox, director of the state hygiene laboratory, the state health department's committee on approval of laboratories and a special committee of the West Virginia State Medical Association composed of Drs. Thomas G. Reed, Charleston, chairman; Guy H. Michael, Parsons, and James L. Patterson, Holden.

GENERAL

Congress on Obstetrics and Gynecology.—The third American Congress on Obstetrics and Gynecology will be held in St. Louis, Sept. 8-12, 1947, under the auspices of the American Committee on Maternal Welfare, 24 West Ohio Street, Chicago 10. The first congress was held in Cleveland in 1939 and the second in St. Louis in 1942.

Campaign for Arthritis Funds.—A campaign to raise $2,500,000 to build a research center in Hot Springs National Park, Ark., for studies of the causes and cures of arthritis was announced July 16 at a luncheon in New York of the sponsoring agency, the National Arthritis Research Foundation. The organization was founded early this year (THE JOURNAL, March 2, p. 592).

Rockwell Kent Medical Drawings Available.—A portfolio of reproductions of the unique illustrations recently completed by Rockwell Kent is being offered by Schering Corporation, Bloomfield, N. J., free on request to interested physicians and pharmacists. The original drawings by Mr. Kent were commissioned by Schering for use in promotion pieces. Each drawing portrays the mental symptoms of a patient suffering from a specific endocrine deficiency.

Mississippi Valley Meeting.—The eleventh meeting of the Mississippi Valley Medical Society will be held at the Hotel Jefferson, St. Louis, September 25-27. The program will include more than thirty-five lectures and clinical presentations. The third meeting of the Mississippi Valley Medical Editors' Association will be held at the Jefferson Hotel, September 25, at which the speakers will include Dr. Vincent Williams, editor, *Jackson County Medical Society Bulletin*, Kansas City, Mo.; Dr. James H. Hutton, chairman of the editorial board, *Illinois Medical Journal*; Dr. Harold Swanberg, Quincy, Ill., editor, *Mississippi Valley Medical Journal and Radiologic Review*, and Col. Wallace H. Graham of George Washington University, personal physician to the President of the United States.

Special Society Elections.—Dr. Cecil J. Watson, Minneapolis, was elected president of the American Society for Clinical Investigation in Atlantic City recently and Dr. William T. Salter, Boston, vice president. Dr. Robert W. Wilkins, Boston, and Dr. Eugene A. Stead Jr., Atlanta, Ga., were elected treasurer and secretary, respectively, to serve for three years. The 1947 session will be at Haddon Hall, Atlantic City, May 5. ——Dr. Walter E. Vest, Huntington, W. Va., was elected president of the American Geriatrics Society at its third meeting in New York, June 13-15. Other officers include Drs. Edward B. Allen and Hollis E. Clow, both of White Plains, N. Y., vice presidents; Dr. Malford W. Thewlis, Wakefield, R. I., secretary, and Dr. Richard J. Kramer, Providence, R. I., treasurer.

Elizabeth Mason-Hohl Award.—The *Medical Woman's Journal* announces sponsorship of its first essay contest, the Elizabeth Mason-Hohl Award, offering a total of $850 in awards for the best unpublished papers on any aspect of research in the field of "Pathologic Changes in Breast Tissue." Award of $500 first prize and $200 second prize will be made for the best papers submitted by women doctors who are subscribers to the *Medical Woman's Journal*. Entries, which must not exceed 5,000 words, should be typewritten in English and submitted in three copies to Dr. Elizabeth Mason-Hohl, Editor, Medical Woman's Journal, 671 North Mariposa Avenue, Hollywood 4, Calif. Copies must be received not later than October 1. Two awards consisting of $150, $100 first prize and $50 second award, will be presented to the junior or senior students who submit the best essays entitled "A Review of Literature on Pathologic Changes in the Cervix Uteri." Student essays must not exceed 3,000 words. The other Elizabeth Mason-Hohl Award provisions apply.

Research on Radioactive Isotopes.—The Barnard Free Skin and Cancer Hospital, St. Louis, is the first hospital in the country to be sold radioactive isotopes, elements which have been exposed to atomic energy and released by the U. S. government from its plant in Oak Ridge, Tenn. Several hundred hospitals, laboratories and research institutions have applied for various types of the new element. The sale to the St. Louis institution was the first of radioactive isotopes to a private institution under the program planned by the War Department prior to the forthcoming turnover of authority for atomic development to civilian agencies for use in medical, biologic and industrial research according to the New York *Times*. The ceremony of the sale took place August 2 at Clinton Laboratories, the atomic research center operated for the government by the Monsanto Chemical Company. The sale of the invisible speck of Carbon 14, contained in a quantity of white powder hardly larger than a crushed aspirin tablet and encased for safety in aluminum and steel containers, was made by Eugene P. Wigner, Dr. Irg., director of research, to Edmund V. Cowdry, Ph.D., director of the Barnard Free Skin and Cancer Hospital, the *Times* stated.

Inservice Extension Course for Medical Record Librarians.—Program arrangements for a five day inservice extension course for medical record librarians to be held in Rochester, N. Y., in September are well under way, with special emphasis on the use of the Standard Nomenclature of Diseases and Operations. Other subjects to be discussed are organization and functions of the record department, interdepartmental relations, minimum essentials, required indexes, medicolegal problems, statistics, staff relationship, confidential nature of records, insurance reports, general principles of management and other special problems. This is the first in a series of twenty-three such courses planned throughout the country for this year. The program is made possible by a grant from the National Foundation for Infantile Paralysis and is under the direction of the Educational Board of the American Association for Medical Record Librarians. Organization of the program is being done by Miss Lillian H. Erickson, Chicago, a past president of the

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American Association of Medical Record Librarians. Miss Margaret Taylor, Rochester, N. Y., also a past president and director of the Medical Record Librarian School at Rochester General Hospital, will direct the instruction.

Anniversary of the Discovery of Insulin.—The American Diabetes Association will hold its sixtieth session in Toronto, Canada, September 16-18, under the presidency of Dr. Joseph H. Barach, Pittsburgh. The first day's program will be devoted to celebrating the twenty-fifth anniversary of the discovery of insulin, and speakers will include Drs. Charles H. Best and Walter R. Campbell, Toronto; Drs. Elliott P. Joslin, Boston; Russell M. Wilder, Rochester, Minn.; Seale Harris, Birmingham, Ala.; David P. Barr, New York, president of the American College of Physicians, and Eugene L. Opie, Rockefeller Institute for Medical Research, New York. The American Diabetes Association has invited Drs. Robert D. Lawrence from London, England, Hans C. Hagedorn from Gertafte, Denmark, and Bernardo A. Houssay from Buenos Aires, Argentina. The second day's program will cover a review of the accomplishments of the past twenty-five years in various aspects of diabetes, and the third day's session, divided into two units, will consist in a presentation of experimental work and research in various phases of insulin and diabetes and the recent investigations in the complications of diabetes. The entire program will be commemorated to Dr. Frederick Banting.

Prevalence of Poliomyelitis.—Reports of cases of poliomyelitis for the periods indicated have been received from the division of public health methods, U. S. Public Health Service, as follows:

Division and State	Aug. 3, 1946	Aug. 4, 1945	Median, 1941-45	Total to Aug. 3, 1946	Total to Aug. 4, 1945
New England States:					
Maine	1	2	1	5	21
New Hampshire	12	1	0	39	10
Vermont	1	5	1	10	14
Massachusetts	11	15	5	24	62
Rhode Island	0	0	0	0	1
Connecticut	0	9	9	29	45
Middle Atlantic States:					
New York	43	83	18	223	458
New Jersey	14	82	7	54	209
Pennsylvania	9	31	15	62	86
East North Central States:					
Ohio	44	12	12	155	91
Indiana	11	5	5	48	32
Illinois	117	26	22	327	67
Michigan	46	5	7	93	30
Wisconsin	30	3	3	72	12
West North Central States:					
Minnesota	257	1	3	623	10
Iowa	50	5	1	123	16
Missouri	77	4	4	198	33
North Dakota	31	0	0	49	6
South Dakota	23	0	0	47	1
Nebraska	38	0	3	110	4
Kansas	80	5	5	206	29
South Atlantic States:					
Delaware	2	2	0	4	7
Maryland	2	6	6	19	34
District of Columbia	2	3	0	4	28
Virginia	12	15	4	35	109
West Virginia	5	0	1	20	19
North Carolina	6	5	2	49	47
South Carolina	1	8	4	16	88
Georgia	8	5	5	75	52
Florida	17	1	1	399	39
East South Central States:					
Kentucky	3	0	8	43	24
Tennessee	10	23	13	39	144
Alabama	14	4	4	200	89
Mississippi	9	1	2	104	25
West South Central States:					
Arkansas	31	2	2	123	19
Louisiana	20	4	4	169	30
Oklahoma	28	14	1	131	69
Texas	43	38	5	547	497
Mountain States:					
Montana	7	0	0	42	5
Idaho	3	0	0	6	2
Wyoming	6	0	0	20	3
Colorado	63	5	2	289	17
New Mexico	9	1	2	44	6
Arizona	9	0	1	38	5
Utah	2	12	1	20	47
Nevada	1	0	0	1	0
Pacific States:					
Washington	13	12	5	89	60
Oregon	5	1	1	25	9
California	60	18	9	411	202
Total	1,286	474	450		
31 weeks			2,766	5,459	2,913

The Ramazzini Society.—The first meeting of the Ramazzini Society was held at the St. Clair Inn, St. Clair, Mich., May 17-20. The society was established in 1942 by "physicians of the Americas engaged in occupational disease work and medical industrial hygiene." The one objective is the sponsoring of an annual lecture to honor the memory of Bernardini Ramazzini, the "patron saint of industrial medicine." Ramazzini was born in Capri in 1633, graduated in medicine at Parma in 1659 and is known by his famous question Of what trade are you? a query developed by his studies among the craftsmen of his community at their various occupations. The society has no officers but names each year one or more "servants" to carry on the necessary correspondence and other matters of the group. Drs. Carey P. McCord and Clarence D. Selby, both of Detroit, were "servants" during the years 1942 to 1946, but because of wartime contingencies a meeting was not assembled until this year. Dr. Robert T. Legge, Berkeley, Calif., gave the first Ramazzini oration, on "Bernardini Ramazzini: His Life, Deeds and Book." "Servants" for the coming year will be Drs. Carl M. Peterson, Chicago, Secretary, Council on Industrial Health, American Medical Association, and Clarence O. Sappington, Chicago. Present membership in the Ramazzini Society includes:

Dr. Joseph C. Aub, Boston.
Dr. Elston L. Belknap, Milwaukee.
Dr. Arthur G. Cranch, New York.
Dr. John G. Cunningham, Toronto, Ontario, Canada.
Dr. Cecil K. Drinker, Boston.
Dr. John H. Foulger, Wilmington, Del.
Dr. Leroy U. Gardner, Saranac Lake, N. Y.
Dr. Albert S. Gray, Hartford, Conn.
Dr. Emery R. Hayhurst, Columbus, Ohio.
Dr. Rutherford T. Johnstone, Los Angeles.
Dr. Robert A. Kehoe, Cincinnati.
Col. Anthony J. Lanza, New York.
Dr. Leggo.
Dr. Ralph C. Leggo, Oak Ridge, Tenn.
Col. Willard F. Machle, New York.
Comdr. William S. McCann, Rochester, N. Y.
Lieut. Col. William J. McConnell, New York.
Dr. McCord.
Dr. William D. McNally, Chicago.
Dr. Stuart F. Meek, Detroit.
Dr. Paul A. Neal, Bethesda, Md.
Dr. Peterson.
Dr. Andrew R. Riddell, Toronto, Ont.
Dr. Oscar A. Sander, Milwaukee.
Dr. Sappington.
Dr. Royd R. Sayers, Washington, D. C.
Col. Louis Schwartz, Bethesda, Md.
Dr. Selby.
Dr. Henry F. Smyth, Philadelphia.
Dr. James H. Sterner, Rochester, N. Y.
Dr. Wolfgang F. Von Oettingen, Bethesda, Md.

Teams in Coal Mines Health Study.—The investigation of health conditions in coal mining areas of the country is now well under way. With Rear Admiral Joel T. Boone, director of the survey, the following teams have been organized to carry out studies of hospital and medical facilities, medical treatment, sanitation, community facilities, housing and welfare and recreational activities:

Area I, Pittsburgh: Comdr. William J. Dougherty (MC), Beverly Farms, Mass.; Comdr. John M. van Hulsteyn (CEC) U.S.N.R., an engineer, Baltimore, and Comdr. James P. Farrell (D), U.S.N.R., Brooklyn, a recreation consultant. This team will work in cooperation with the area administrative office of the Coal Mines Administration, headed by Capt. O. L. Carlson (CEC), U.S.N.R., with headquarters in Pittsburgh. The Pittsburgh area includes western Pennsylvania, northern West Virginia, western Maryland and eastern Ohio. The immediate work of the team will be in the vicinity of Pittsburgh and Fairmont, W. Va.

Area II, Ashland, Ky.: Comdr. Frank R. Philbrook (MC) (S), Randolph, Mass.; an engineer, Lieut. Comdr. Ralph L. Wright (CEC), U.S.N.R., Hillsboro, Ill., and a welfare and recreation consultant, Comdr. Edward T. King (S), U.S.N.R., Brooklyn. Chief Yeoman Alfred B. Haskell, U.S.N., Philadelphia, will serve as clerical assistant to the team. This team will work under the administrative control of the Coal Mines Administration area officer in charge, Comdr. J. Gordon King (S), U.S.N.R., with headquarters in Ashland. Area II includes southern West Virginia, Kentucky, Virginia, eastern Tennessee, South Carolina and northern Alabama. The initial work will be in Kentucky and West Virginia.

Area III, Chicago: Comdr. Karl J. Palmberg (MC), Red Oak, Iowa; an engineer, Comdr. D. R. Dorsey (CEC), U.S.N.R., Baltimore, and a consultant in welfare and recreation, Lieut. Arthur B. Lyon, Galesville, Wis. Chief Yeoman H. W. McKague, U.S.N., San Francisco, will serve the team as clerical assistant. Area III includes Illinois, Indiana, Iowa and Michigan. The team will work under the administrative control of the Coal Mines Administration, area officer in charge, Capt. F. C. Nyland (CEC), U.S.N., with headquarters in Chicago. Immediate work will be in Iowa and Illinois.

Area IV, Kansas City, Mo.: Comdr. John R. Gateley (MC), Seattle; Lieut. Comdr. E. F. Philpott (CEC), U.S.N.R., Portland, and Lieut. Carl A. Nastri, U.S.N.R., a recreation and welfare consultant, New Haven, Conn. This team will work in cooperation with the area administrative office of the Coal Mines Administration, headed by Comdr. J. S. Stevenson (CEC), U.S.N.R., with headquarters in Kansas City. Area IV includes the states of Missouri, Kansas, Oklahoma and Texas. First work of the team will be in Missouri, Kansas and Texas.

Area V, Denver: Comdr. John F. Shronts (MC), Woodstock, Ill.; an engineer, Lieut. Comdr. Glenn S. Buie (CEC), U.S.N.R., Patrick, S. C., and a recreation and welfare consultant, Lieut. Comdr. Charles J. O'Neill (S), U.S.N.R., Rye, N. Y. Chief Yeoman C. B. Cook, Columbia, Miss., will serve the team as clerical assistant. The team will work under the administrative control of the Coal Mines Administration area officer in charge, Comdr. Leon E. Smith, SC(S), U.S.N.R., with headquarters in Denver. Area V includes Colorado, New Mexico, Arizona, California, Wyoming, eastern Idaho, Utah, Montana, Washington, Oregon and Alaska. Initial work will be in Montana, Washington and Utah.

In each case the medical officer is in charge. Vice Admiral Ben Moreell is coal mines administrator. The entire health project is being made as the result of an agreement May 29

between the Coal Mines Administration and the United Mine Workers. A preliminary outline was published in THE JOURNAL, August 10, page 1233. Admiral Boone is director of the survey and medical adviser to the coal mines administrator. The results of local studies by the various teams will be forwarded to the medical study group in Washington for final analysis and evaluation.

FOREIGN

Food Requested for Physicians in Vienna.—The president of the Wiener Arztekammer, I., Weihburggasse 10-12, Vienna, writes that the food situation in Vienna is desperate. He requests American physicians to help if they will by sending food parcels to the Wiener Arztekammer. He pledges himself to distribute these parcels only to physicians whose opposition to the Nazis is above suspicion. He states that there are about 1,500 to 2,000 anti-Nazi physicians in Vienna.

Physicians Needed for Medical Missions.—The Christian Medical Council for Overseas Work on July 1 issued another appeal for physicians to consider the possibilities of service in overseas mission hospitals (THE JOURNAL, February 2, p. 305). In all the fields where the church maintains organized medical work, especially China, Africa and India, the great need is for men and women with thorough basic training and adequate experience in general medicine and surgery, including a residency in the latter. From time to time there are calls from our union medical colleges for those who have specialized in some particular branch of medicine or surgery or in the preclinical sciences. The applicant should be a member of one of the regular Protestant denominational churches, motivated by a genuine spirit of Christian service and ready to enlist for life work in a pioneer general hospital. Specialists are usually assigned to the larger urban hospitals or medical teaching centers. The salary is approximately $75 a month for a single person and double that for a couple, with residence and various additional allowances (e. g., for children) which enable individuals or families to enjoy comparatively high levels of living in the countries to which they are appointed. Any one interested should communicate with the Christian Medical Council for Overseas Work, 156 Fifth Avenue, New York 10.

Deaths in Other Countries

Dr. Louis Martin, honorary director of the Pasteur Institute and co-discoverer of the diphtheria serum, died in Paris, June 13.

Government Services

Developments of the Institute and Registry of Pathology

With the reorganization of the Army Institute of Pathology to be completed during 1946 and 1947, a full time scientific director of the American Registry of Pathology will be appointed and sufficient clerks and technicians will be available to assure adequate use of the registries for diagnosis, research, training of young men and education of the professions. The American Registry of Pathology was founded in 1922 as an integral part of the Army Institute of Pathology. On Jan. 1, 1946 there were more than 43,000 cases registered. The Army Institute of Pathology was established in 1863 as the Army Medical Museum. During World War II the activities of the institute were greatly expanded, especially in the field of diagnostic pathology and research. There are now on file over 170,000 accessions. The results of research at the institute during the past few years will be published in a volume of about fourteen hundred pages as a part of the official history of World War II. The present director is Col. James E. Ash, Washington, D. C., who will be succeeded on October 1 by Col. Raymond O. Dart (THE JOURNAL, April 13, p. 1042). On request of Major Gen. Norman T. Kirk, Surgeon General of the Army, the Committee on Pathology of the National Research Council, division of medical sciences, in late 1945 prepared a report on the future development of the institute. The report has been approved by the Surgeon General and by the War Department. The essential recommendations in this report are that a new building of adequate size be constructed; that the institute be organized in four divisions, department of pathology, Army Medical Illustration Service, Army Medical Museum and American Registry of Pathology, each headed by a competent specialist; that the staff of the institute be drawn from both the commissioned ranks of the army and from the civilian professions; that a comprehensive educational and training program be undertaken; that the vast store of material at the institute be used for research, and that the services in pathology in the veterans' hospitals be centralized at the institute. To effectuate the new plans as they relate to the registry, the National Research Council, division of medical sciences, appointed a committee on the American Registry of Pathology. The members of the committee are Dr. Howard T. Karsner, Cleveland, chairman; Colonel Ash, Washington; Brig. Gen. George R. Callender, Washington; Col. Balduin H. E. W. Lucké, Philadelphia; Dr. Robert A. Moore, St. Louis; Dr. Benjamin Rones, Washington; Dr. Alfred R. Shands Jr., Wilmington, Del., and Henry A. Swanson, Washington. At the present time there are fourteen registries as a part of the American Registry of Pathology. These include the Registry of Ophthalmic Pathology, established in 1922, sponsored by the American Academy of Ophthalmology and Otolaryngology; Lymphatic Tumor Registry, established in 1925, sponsored by the American Association of Pathologists and Bacteriologists; Bladder Tumor Registry, established in 1927; Kidney Tumor Registry, established in 1940, and Prostatic Tumor Registry, established in 1943, sponsored by the American Urological Association; Registry of Dental and Oral Pathology, established in 1933, sponsored by the American Dental Association; Registry of Otolaryngological Pathology, established in 1935, sponsored by the American Academy of Ophthalmology and Otolaryngology; General Tumor Registry, established in 1937, sponsored by the American Society of Clinical Pathologists; Registry of Dermal Pathology, established in 1938, sponsored by the American Academy of Dermatology and Syphilology; Chest Tumor Registry, established in 1942, sponsored by the American Society of Thoracic Surgeons; Registry of Neuropathology, established in 1943, sponsored by the American Association of Neuropathologists; Registry of Orthopedic Pathology, established in 1943, sponsored by the American Academy of Orthopaedic Surgeons; Registry of Veterinary Pathology, established in 1944, sponsored by the American Veterinary Medical Association, and Registry of Gerontology, established in 1945, sponsored by the Gerontological Society, Inc. Plans for additional registries are under consideration. A professional scientific society wishing to sponsor a registry should communicate with the Director, Army Institute of Pathology, 7th Street and Independence Avenue S. W., Washington 25, D. C. The society appoints a committee to work with the director in supervision of the activities of the registry and makes an annual contribution to the budget which is administered by the National Academy of Sciences. All specimens in the registry are available for review and research by competent investigators. Sets of slides and accompanying syllabuses on special fields are available for loan to the civilian professions and officers in the federal services. Physicians, dentists and veterinarians are urged to send unusual specimens together with an abstract of the history to the registry. The contributor receives a report on each specimen and is asked to keep the registry informed on the follow-up of the patient.

Medical Officers Needed for Panama Canal Office

Medical officers are urgently needed for duty in the Panama Canal at the Isthmus of Panama, according to an announcement July 3 from the Washington Office of the Panama Canal. The entrance salary is $5,187 a year, and free transportation to the Isthmus is provided. Applicants must be graduates of approved medical schools and have successfully completed at least a one year internship in approved hospitals or have the equivalent of a one year internship subsequent to the completion of a four year course of instruction in an approved medical school Applicants must also be American citizens, in good physical condition and between the ages of 22 and 45 years. Interested persons are urged to communicate with the Chief of Office, the Panama Canal, Washington 25, D. C., who will be glad to furnish further details and application blanks. When vacancies occur in higher grade positions, promotions are made within the service whenever practicable. Government furnished bachelor quarters are available at a cost of about $8 to $12 per month, and food costs in the Canal Zone restaurants are approximately the same as in the United States. Although appointees are required to pass a thorough medical examination, the physical requirements are not as high as for army or navy service, and physicians who have been rejected for military or naval duty on account of some minor physical defect might be able to qualify for civilian duty at the Panama Canal. A retirement plan is in operation

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Deaths

Howard Francis Kane ✠ Washington, D. C.; George Washington University School of Medicine, Washington, D. C., 1912; born in Machias, Maine, May 14, 1887; served as clinical professor of obstetrics and gynecology at his alma mater, where he had been a member of the teaching staff since 1916; fellow of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, International College of Anesthetists and American College of Surgeons; member of the American Association for the Advancement of Science and the Military Order of Foreign Wars; specialist certified by the American Board of Obstetrics and Gynecology; a first lieutenant and captain in the medical corps of the U. S. Army, serving with the British Expeditionary Forces from 1917 to 1919, when he became a major in the medical reserve corps of the U. S. Army, holding that rank until 1928; decorated by the British with the Military Cross in 1917; lieutenant commander in the U. S. Naval Reserve from 1937 to 1940, when he became a commander and served with that rank in the medical corps of the U. S. Naval Reserve as consulting obstetrician at the U. S. Naval Hospital in San Diego during World War II; on the staffs of the Garfield Memorial, Gallinger Municipal, George Washington University and Central Dispensary and Emergency hospitals; served on the editorial board of the *Quarterly Review of Obstetrics and Gynecology;* received the Frank E. Gibson annual award of certificate and purse for "meritorious contributions to medical science" at the annual banquet of the Washington Medical and Surgical Society in May 1939; died in Machias, Maine, July 21, aged 59, of coronary thrombosis.

Charles Lee Hoagland, New York; Washington University School of Medicine, St. Louis, 1935; born in Benkleman, Neb., June 6, 1907; assistant in medicine in 1935 and subsequently appointed assistant in pathology and instructor in medicine at his alma mater; member of the American Association of Immunologists, American Society for Clinical Investigation, Harvey Society, New York Academy of Medicine, Society for Experimental Biology and Medicine, Society for American Bacteriologists and the Century Association; served for a period during World War II as a lieutenant in the medical corps of the U. S. Naval Reserve; initiated an intensive investigation of infectious jaundice in navy patients who were sent to the Rockefeller Hospital for study and was also named a consultant to the Surgeon General of the U. S. Army; known for his investigations on the chemical nature of purified vaccine virus which showed that this virus is of a complex nature with considerable organization and which constituted the first adequate study of the chemical nature of an animal virus; also known for his research on the metabolism of abnormal muscles; devised the best methods for the treatment of cirrhosis of the liver and infectious hepatitis; on Oct. 1, 1937 joined the Rockefeller Institute for Medical Research, where he later served as assistant resident physician at the hospital, where he subsequently acted in various capacities there and on the staff of its hospital, where he died August 2, aged 39, of cardiovascular disease.

Donald Russell Hooker, Baltimore; Johns Hopkins University School of Medicine, Baltimore, 1905; born in New Haven, Conn., Sept. 7, 1876; for many years secretary of the Federation of American Societies for Experimental Biology and the American Social Hygiene Association; member of the American Medical Association and the American Physiological Society; served as assistant instructor, associate and associate professor of physiology at his alma mater; with Mrs. Hooker founded the Roosevelt Park Recreation Center more than thirty years ago; managing editor of the *American Journal of Physiology* and *Physiological Reviews,* having also been one of the founders of the latter; died in the Johns Hopkins Hospital August 1, aged 69.

Champneys Holt Holmes, Atlanta, Ga.; Johns Hopkins University School of Medicine, Baltimore, 1919; born in Macon, Ga., Jan. 30, 1894; member of the American Medical Association, Southern Tuberculosis Association and the National Tuberculosis Association; member and past president of the American College of Chest Physicians; served as staff member and president of the Atlanta Tuberculosis Association; fellow of the American College of Physicians; for many years instructor in medicine at the Emory University School of Medicine; on the staffs of the Grady and University hospitals; on the editorial board of *Diseases of the Chest;* died in a hospital at Jacksonville, Fla., June 12, aged 52.

Andrew Milliken Smith ✠ Egg Harbor City, N. J.; Jefferson Medical College of Philadelphia, 1923; fellow of the American College of Allergists; served as president of the board of health of Egg Harbor and school physician; served during World War I; member of the staff of the Jefferson Hospital in Philadelphia, serving as clinical assistant in the allergy department; president of the staff of the Atlantic County Hospital for Tuberculous Diseases (Pine Rest Sanitarium), Northfield; died in the Atlantic City Hospital May 18, aged 50, of pneumonia.

Matilda Buck, Philadelphia; University of Michigan Department of Medicine and Surgery, Ann Arbor, 1889; died March 24, aged 84, of pulmonary tuberculosis.

Frank Marion Coppock Jr., Cincinnati; Ohio-Miami Medical College of the University of Cincinnati, 1914; served as professor of surgery and head of the department of gynecology at his alma mater, now known as the University of Cincinnati College of Medicine; member of the American Medical Association; coroner of Hamilton County; served during World War I; on the staffs of the Christ Hospital and the Home for Incurables; died May 9, aged 58, of uremia.

Edward Harrison Crane ✠ Playa del Rey, Calif.; State University of Iowa College of Medicine, Iowa City, 1904; died in the Good Samaritan Hospital, Los Angeles, May 2, aged 70, of cholecystitis and cholelithiasis.

William Timothy Crowley, Milwaukee; St. Louis University School of Medicine, 1923; died in Mount Sinai Hospital April 20, aged 50, of cirrhosis of the liver.

Emery John Csema ✠ New Brunswick, N. J.; Magyar Királyi Pázmány Petrus Tudomanyegyetem Orvosi Fakultasa, Budapest, Hungary, 1920; died April 3, aged 52, of myocarditis.

Grafton Ellsworth Day, Collingswood, N. J.; College of Physicians and Surgeons, Baltimore, 1894; member of the American Medical Association; past president of the Camden County Medical Society; died May 2, aged 76, of coronary thrombosis.

Frank Joseph Gobar, Lucerne Valley, Calif.; Rush Medical College, Chicago, 1885; served on the staff of the Fullerton (Calif.) Hospital; died April 19, aged 85, of heart disease.

William Edward Hart, Odebolt, Iowa; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1903; member of the American Medical Association; died April 8, aged 76, of arteriosclerotic heart disease.

Paul J. Hilgendorf, Fountain, Colo.; Chicago Homeopathic Medical College, 1889; American Medical College, St. Louis, 1890; died April 30, aged 80, of cerebral hemorrhage.

Frank Whitehill Hinkel, Buffalo; University of Pennsylvania Department of Medicine, Philadelphia, 1882; member of the American Laryngological Association; formerly clinical professor of laryngology and otology at the University of Buffalo School of Medicine and on the staff of the Buffalo General Hospital; died April 2, aged 88, of myocardial failure.

Laurence Harold Hoffman ✠ San Francisco; Cooper Medical College, San Francisco, 1897; an Affiliate Fellow of the American Medical Association; fellow of the American College of Surgeons; served during World War I; on the staffs of the Mount Zion, St. Francis and Dante hospitals; died April 23, aged 68, of coronary arteriosclerosis.

William George Hogan, Neck, Mo.; University Medical College of Kansas City, 1903; member of the American Medical Association; served overseas during World War I; formerly county coroner; died in St. John's Hospital, Joplin, April 20, aged 67, of lymphosarcoma.

Malcolm Emmett House, Holland, Mich.; Syracuse University College of Medicine, 1905; died in the Holland City Hospital April 24, aged 66, of second and third degree burns received when his apartment caught fire.

Clarence A. Hull, New Milford, Pa.; Hahnemann Medical College and Hospital of Philadelphia, 1893; died in Rush April 7, aged 86, of heart disease.

Leo F. Hummer, Salt Lake City; St. Louis University School of Medicine, 1905; member of the American Medical Association; elected to the state legislature as a representative of the Eighth District in 1934, serving two terms; medical specialist for the Veterans Administration; on the staff of the Holy Cross Hospital, where he died April 4, aged 65, of arteriosclerosis and myocardial failure.

Ella Grace Hunt, Cincinnati; the Hahnemann Medical College and Hospital, Chicago, 1893; died in Wickliffe, Ohio, April 14, aged 76, of heart disease.

Albert Warren James, Laurinburg, N. C.; Jefferson Medical College of Philadelphia, 1918; member of the American Medical Association; served during World Wars I and II; founder and medical director of the Laurinburg Hospital; died April 4, aged 51, of coronary thrombosis.

Charles Frederic Jellinghaus, Shirley, Mass.; Columbia University College of Physicians and Surgeons, New York, 1901; formerly assistant professor of clinical obstetrics and gynecology at the Cornell University Medical College, New York, where he was on staffs of the New York Lying-In and City hospitals; specialist certified by the American Board of Obstetrics and Gynecology, Inc.; fellow of the American College of Surgeons; died April 22, aged 68, of cerebral hemorrhage.

William Logan Johnson, Thompsonville, Ill.; Missouri Medical College, St. Louis, 1897; member of the American Medical Association; died April 16, aged 77, of coronary occlusion.

Albert E. Kennedy, Magee, Miss.; University of Tennessee Medical Department, Nashville, 1902; member of the American Medical Association; formerly mayor; died May 14, aged 66, of heart disease.

Robert Lawson Kennedy, Panama City, Fla.; University of Maryland School of Medicine, Baltimore, 1910; died May 10, aged 57, of coronary occlusion.

Edwin Bailey Kenner, Wentzville, Mo.; Missouri Medical College, St. Louis, 1887; member of the American Medical Association; served during World War I; died in the Barnes Hospital, St. Louis, April 30, aged 83, of heart disease and bronchopneumonia.

John J. Kerrigan, Michigan City, Ind.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1894; member of the American Medical Association; honorary member of the Indiana State Medical Association; died in St. Anthony's Hospital, May 5, aged 90, of chronic myocarditis and bronchiectasis.

George T. Kesner, Atlanta, Ga.; Medical College of Georgia, Augusta, 1897; died in Decatur April 16, aged 82, of senility.

Leo Julius Kilian ✦ Wayne, Neb.; Washington University School of Medicine, St. Louis, 1913; past president of the Wayne County Medical Society; served during World War I; died April 27, aged 56, of coronary occlusion.

John Bernard Killoran, Wright City, Mo.; St. Louis University School of Medicine, 1930; member of the American Medical Association; killed April 6, aged 50, when a broken power cable wire struck him on the head.

Charles Ordway King ✦ Birmingham, Ala.; Vanderbilt University School of Medicine, Nashville, 1909; specialist certified by the American Board of Dermatology and Syphilology; member of the American Academy of Dermatology and Syphilology; served as vice president of the Jefferson County Medical Society; on the staffs of the Baptist Hospital (West End and Highland Avenue Branches), Hillman Hospital, South Highlands Infirmary and St. Vincent's Hospital; died May 6, aged 57, of coronary thrombosis.

George Knapp, Riverside, Calif.; University of Tennessee Medical Department, Nashville, 1892; died April 20, aged 86, of atypical pneumonia and congestive heart disease.

Frederick Edwin Knowles, Boonton, N. J.; College of Physicians and Surgeons, Baltimore, 1906; member of the American Medical Association; past president of the Morris County Medical Society; a member of the staffs of the Morristown Memorial Hospital and St. Mary's Hospital in Orange; died in the General Hospital, East Orange, May 6, aged 68, of ruptured esophageal varices and cirrhosis of the liver.

Jacob Kussart, Glendale, Calif.; Kansas City (Mo.) Medical College, 1900; Barnes Medical College, St. Louis, 1901; died March 6, aged 77, of pulmonary tuberculosis

James Thomas Lawless Jr., Toledo, Ohio; Toledo Medical College, 1901; served during World War I; on the staff of St. Vincent's Hospital; died May 2, aged 70, of carcinoma of the prostate and liver.

Mary Esther Mellodew Loog, Brookline, Pa.; Woman's Medical College of Pennsylvania, Philadelphia, 1896; served on the staffs of the Monmouth Memorial Hospital in Long Branch, N. J., and the Woman's Medical College Hospital in Philadelphia, where she died May 3, aged 72, of coronary thrombosis.

James Love, Troy, N. Y.; University of Vermont College of Medicine, Burlington, 1898; member of the American Medical Association; formerly city health officer and county coroner; died May 18, aged 70, of acute myocarditis and mitral regurgitation.

Charles Carroll McArdle, Monroeville, Ind.; Indiana University School of Medicine, Indianapolis, 1923; died in St. Joseph's Hospital, Fort Wayne, April 17, aged 54, of cirrhosis of the liver.

Louis Vincent McGovern, Brooklyn; University and Bellevue Hospital Medical College, New York, 1902; specialist certified by the American Board of Internal Medicine; fellow of the American College of Physicians; on the staffs of St. Catherine's Hospital and the Wyckoff Heights Hospital, where he died April 29, aged 71, of hemiplegia.

Tinsley J. McMurry, Simpsonville, Ky.; University of Louisville Medical Department, 1889; member of the county board of health; died in the King's Daughters' Hospital, Shelbyville, April 24, aged 79, of carcinoma of the lungs and liver.

Charles Pope Marshall, Centralia, Ill.; Rush Medical College, Chicago, 1881; died in St. Mary's Hospital May 7, aged 90, of cerebral hemorrhage.

James West Meaders, Macon, Ga.; Medical College of Georgia, Augusta, 1889; died March 8, aged 86, of cerebral thrombosis.

Richard Mollenhauer, Mount Vernon, N. Y.; Bellevue Hospital Medical College, New York, 1880; died April 16, aged 92, of bronchopneumonia, acute pyelonephritis and coronary sclerosis.

Benton McQueen Montgomery, Kingstree, S. C.; Medical College of the State of South Carolina, Charleston, 1912; member of the American Medical Association; secretary of the Williamsburg County Medical Society; county health officer; died April 2, aged 57, of pulmonary emphysema with congestive heart disease.

Joseph Moses Moore, Chicago; Meharry Medical College, Nashville, Tenn., 1923; died March 13, aged 60, of chronic nephritis.

Thomas Marlett Moore, Willoughby, Ohio; University of Wooster Medical Department, Cleveland, 1878; past president of the Lake County Medical Society; affiliated with the Lake County Memorial Hospital in Painesville; died May 5, aged 89, of carcinoma of the ear.

Patrick Joseph Murray, Brooklyn; Bellevue Hospital Medical College, New York, 1895; formerly chief surgeon of the police department; died April 2, aged 76, of coronary occlusion.

Augustus Michael O'Brien ✦ Sharon, Pa.; Baltimore Medical College, 1900; served during World War I; on the staff of the Christian H. Buhl Hospital; died in the Mercy Hospital, Pittsburgh, May 2, aged 72, of acute mesenteric thrombosis.

Lister Pomerene, Coshocton, Ohio; Kentucky School of Medicine, Louisville, 1891; on the staff of the Coshocton Hospital; died April 13, aged 78, of arteriosclerosis.

William Frank Ragan ✦ Milwaukee; Milwaukee Medical College, 1908; member of the Milwaukee Academy of Medicine; on the staff of the Sacred Heart Sanitarium; died May 6, aged 59, of coronary thrombosis.

Samuel Rainville, Crosby, N. D.; Minneapolis College of Physicians and Surgeons, 1897; served as county coroner and county health officer; on the staff of St. Luke's Hospital; died May 1, aged 71, of coronary occlusion.

Worthington Leslie Rantz, Andrew, Iowa; American College of Medicine and Surgery, Chicago, 1905; served as mayor of Andrew and during World War I; died in Knoxville May 15, aged 78, of cerebral hemorrhage.

Juan Bautista Sacasa, Los Angeles; Columbia University College of Physicians and Surgeons, New York, 1897; formerly president and vice president of Nicaragua; served as vice president of the International Spanish Speaking Association of Physicians; at one time dean and professor of the Faculty of Medicine of Nicaragua, dean of the School of Medicine of the University of Leon and president of the Superior Council of Public Health of Nicaragua; served as minister plenipotentiary in Washington; died April 17, aged 71, of coronary thrombosis.

Jessie M. Thornton Scott, Vienna, Va.; Woman's Medical College of Baltimore, 1901; served in army hospitals during World War I; died in Arlington (Va.) Hospital April 30, aged 72, of chronic myocarditis.

William Franklin Seabold, Ewell, Md.; Jefferson Medical College of Philadelphia, 1907; major, medical reserve corps, U. S. Army, not on active duty; retired Philadelphia police surgeon; died May 3, aged 72, of carcinoma of the left lower jaw.

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Walter C. Snyder, Horton, Mich.; the Hahnemann Medical College and Hospital, Chicago, 1886; died in the W. A. Foote Memorial Hospital, Jackson, April 27, aged 84, of arteriosclerosis.

Robert Stewart, Secaucus, N. J.; New York University Medical College, New York, 1898; major, medical reserve corps, U. S. Army, not on active duty; for many years affiliated with the Hudson County Hospital; surgeon for the Erie Railroad and the Delaware, Lackawanna and Western Railroad for more than twenty-five years; died in the Medical Center of Jersey City, May 7, aged 71, of coronary thrombosis and fractured right femur.

Adam Leo Szwajkart ✦ Chicago; University of Illinois College of Medicine, Chicago, 1917; an officer in the Polish army during World War I; member of the American College of Chest Physicians; served on the staff of the Municipal Tuberculosis Sanitarium where he died May 23, aged 51, of pulmonary tuberculosis and diabetes mellitus.

Clarence A. Toles, Indianapolis; Indiana University School of Medicine, Indianapolis, 1909; served as deputy coroner and as medical inspector in the public schools; died in the City Hospital May 9, aged 64, of cardiovascular disease.

John B. Ward, Chicago; Illinois Medical College, Chicago, 1908; died in Lake Villa, Ill., May 25, aged 62, of cerebral hemorrhage.

William Krafft Ward ✦ Detroit; Columbian University Medical Department, Washington, D. C., 1899; for six years a commissioned medical officer of the U. S. Public Health Service with tours of duty at principal seaports in the United States and the West Indies; head of the medical correspondence department at Parke, Davis & Company; died May 9, aged 70, of cerebral hemorrhage.

Blakely Royce Webster, Plattsburg, N. Y.; Cornell University Medical College, New York, 1907; member of the American Medical Association and the American Psychiatric Association; retired medical superintendent of the Dannemora (N. Y.) State Hospital; served on the consulting staff of the Champlain Valley Hospital and the Physicians Hospital, where he died May 10, aged 62, of carcinoma of the lung.

Thomas Cummings Zulick ✦ Easton, Pa.; University of Pennsylvania Department of Medicine, Philadelphia, 1891; an Affiliate Fellow of the American Medical Association; fellow of the American College of Surgeons; surgeon to the Lehigh Valley Railroad and Lehigh Valley Transit Company for many years; vice president of the Northampton National Bank; emeritus surgeon in chief at the Easton Hospital, where he died May 19, aged 77, of intestinal obstruction.

CAPT. CHARLES KELTZ
M. C., A. U. S., 1908-1944

LIEUT. ROBERT THOMAS BROWNE
(MC), U.S.N.R., 1916-1945

MAJOR CLARENCE H. WHITE
M. C., U. S. Army, 1905-1944

James Luther Ward, Greenwood, S. C.; University of Georgia Medical Department, Augusta, 1898; affiliated with the Greenwood Hospital; died May 10, aged 67, of cerebral hemorrhage.

KILLED IN ACTION

Charles Keltz, Los Angeles; Temple University School of Medicine, Philadelphia, 1932; member of the American Medical Association; interned at the Los Angeles County General Hospital number one; began active duty in the medical reserve corps of the U. S. Army on Dec. 15, 1940; promoted to captain in the medical corps, Army of the United States; sailed for the Philippine Islands in January 1941 and was stationed at Fort McKinley, near Manila, until our forces were moved out on Bataan on Dec. 7, 1941; following the fall of Bataan, made the Death March, later was a prisoner of war at Camp O'Donnell, Cabanuatuan, Camp number 3 and Camp number 4; killed in action in the South China Sea Oct. 24, 1944, aged 36, as the result of the sinking of a Japanese ship on which he was being transported while a prisoner of war.

Robert Thomas Browne, Peoria, Ill.; University of Illinois College of Medicine, Chicago, 1942; interned at St. Louis City Hospital; began active duty as a lieutenant (jg) in the medical corps of the U. S. Naval Reserve, July 10, 1943; promoted to lieutenant; received the Navy Cross "for extraordinary heroism while attached to the U. S. S. *Johnston* in action against enemy Japanese forces off the island of Samar during the second battle of the Philippines on Oct. 24, 1944," the Presidental unit citation, ribbon bar and Bronze Star awarded to members of the task unit to which he was attached and serving on board the U. S. S. *Johnston;* received the Purple Heart; presumptive date of death Oct. 26, 1945, in the Asiatic area, according to the Navy Department, aged 29.

Clarence Harold White ✦ Major, M. C., U. S. Army, Los Angeles; State University of Iowa College of Medicine, Iowa City, 1931; Army Medical School, 1935; Medical Field Service School, 1936; entered the medical corps of the U. S. Army in 1934; killed by air attack Dec. 15, 1944, in the Pacific area while being transported aboard a Japanese vessel from Philippine Islands to Japan, aged 39.

Foreign Letters

LONDON

(From Our Regular Correspondent)

July 13, 1946.

The Mode of Spread of Influenza

Opening a discussion at the Empire Conference of the Royal Society on the spread of influenza, Dr. C. H. Andrewes said that there were two apparently conflicting views and that both might be right. According to one theory, influenza always reached a country from outside, and hence such terms as Russian or Spanish were used according to the supposed place of origin. Outbreaks in Britain usually lasted for at most three months, and virus A, the more important of the two known viruses, might not be recognized at all in this country for the twenty-one months or so before the outbreak. Was its normal existence a progression round the world, producing epidemics from the Northern to the Southern hemispheres and back again according to season? The records did not support this view. Epidemics in Britain, on the European continent and in North America tended to appear at about the same time and had no discernible relation to those in the Southern Hemisphere.

Another view supposed that influenza viruses were always with us, perhaps in the respiratory tracts of carriers, perhaps causing between epidemics subclinical infections or sporadic respiratory ailments. Then after a time the immunity of the population waned and some climatic or other undefined factor set the stage for an outbreak. In favor of this view was the occurrence in Britain in 1937 of a number of antigenic variants of the influenza virus, all in one outbreak. Also viruses A and B had been found in the same epidemic. Andrewes was convinced of this endogenous origin until virus B began to cause trouble in June 1945 in Hawaii and Guam. Then it spread east and mild epidemics appeared in the next few months in the Carribean area, the more northern parts of South America and Texas. Thence a rather slower spread occurred in the United States but virus B was widely prevalent there by November. In Europe it did not appear until December in the Netherlands and Belgium; the peak was in Britain in January. From the Pacific the virus apparently also went southward and caused an outbreak in Australia at what was for them an unusual time, November. There were two reasons for believing that there was a true spread over the world: 1. B strains recently recovered in Australia and Britain were antigenically closely related and decidedly different from the standard B strain isolated in America by Lee in 1940. 2. The disease showed unusual epidemiologic features and those described in Australia by Burnet were identical with those seen later in Britain.

Nuffield Foundation Promotes Medical Research

Early in 1943 the automobile magnate Lord Nuffield established the Nuffield Foundation, which he endowed with $40,000,000 for philanthropic purposes, mainly medical. The trustees have published a report on the work during the first three years, in which grants totaling $3,500,000 have been made. The promotion of child welfare is a prominent aim, and the trustees have cooperated in the plans of the University of London for the creation of an Institute of Child Health. The main object will be the training of specialists and general practitioners in child health, but provision will also be made for the training of other workers having the control of children. The permanent building is to be erected near the greatest hospital for children in the British Empire, the Hospital for Sick Children, London.

Another interest of the foundation is industrial health. Early in 1944 it approached three universities to learn what plans they might have for developing departments of teaching and research in industrial health and to ascertain whether and how the foundation might assist in their speedier realization. These universities submitted particulars of their plans, and the foundation allocated sufficient grants, spread over ten years, to enable their schemes to be developed. The Universities of Durham and of Newcastle received $160,000 each and the University of Manchester $280,000.

A third interest is dental health, for which a program of activitics has been drawn up extending over the next few years and to cost $600,000. There will be scholarships to encourage persons of suitable ability to prepare for an academic career in dentistry. Help will be given to certain dental schools in improving the quality of the teaching and the facilities for dental research.

PARIS

(From Our Regular Correspondent)

June 27, 1946.

Early Diagnosis of Cancer of the Stomach

During the Three Medical Days R. Guttmann reviewed his recent research and presented observations on several hundred cases of early x-ray signs of cancer of the stomach. The cancerous region comprises especially the pylorus angle, the horizontal part of the lesser curvature and the subcardiac region. Ulcer of the greater curvature is not always malignant. The author has developed a system of interpretation for niches. Their seriousness does not depend on their size but on their progressive character and their slow growth. The irregularity of the niche is important in course of evolution; the irregularity of the gastric mucosa around the niche, the anarchic orientation of the folds and the absence of modification by palpation are bad signs. As a rule, hardness and stiffness of x-ray images are bad signs; well outlined lesions are suggestive as well as pyloric insufficiency coinciding with signs of juxtapyloric infiltration. Several degrees of seriousness can be distinguished radiographically and clinically.

Infantile Phthisiology

A newly organized group for the scientific study of infantile phthisiology has been created, including specialists in phthisiology, pediatrics, surgery of extrapulmonary tuberculosis, orthopedics and physicians of children's sanatoriums and preventoriums.

Fiftieth Anniversary of Pasteur's Death

Memorial ceremonies of Pasteur's death will take place early in December. An exhibition of his works will be made at the Palace of Discovery. Several foreign scientists will be invited by the French government.

Death of Professor Lisbonne

Prof. Marcel Lisbonne, a specialist in undulant fever, is dead. Since 1930 he had been director of the research center for undulant fever in France organized by the Rockefeller Foundation at the Buisson-Bertrand Institute at Montpellier. His research on the prophylaxis of human Malta fever and the contagious abortion of cows by large scale vaccination has led to remarkable results. Since 1944 he had been a national correspondent of the Academy of Medicine.

Professor Roger's Death

Prof. Henri Roger, late dean of the Paris Faculty of Medicine, is dead. He held the professorship of experimental medicine in Paris from 1904 to 1925 and then the professorship of physiology. His works on bile, on digestive fermentation, on

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the lymphoid apparatus of the intestine and on the internal functions of the lungs are classics. He was the author of the "Introduction to the Study of Medicine," which is dedicated to medical students. His principal book, "Rudiments of Psychophysiology" was published a few days before his death. He was a member of the Academy of Medicine.

Miscellaneous

The Academy of Medicine has commemorated the death of Thomas Hunt Morgan of San Francisco, 1933 laureate of the Nobel Prize in medicine and recently nominated a foreign associate of the French Academy of Medicine.

By decision of the Academy of Medicine, folliculin and synthetic estrogen are included in table C and submitted to medical control, because of their sale as abortifacients, properties which they do not possess, as reported by Portes and Varangot to the Academy of Medicine.

The professorship of alimentary problems at the Paris Faculté de médecine has been inaugurated by Prof. Charles Richet, a late "deported" and a specialist in nutritional disease.

Prof. Michel Dechaune, editor of the *Review of Stomatology*, has been nominated to the chair of stomatology, recently created at the Paris Faculté de médecine.

The General Assembly has adopted a new law which makes compulsory the reporting to the medical service of cases of pulmonary tuberculosis with positive sputums. Admission to a hospital is also compulsory for such patients when necessitated by their condition or the lack of proper care.

AUSTRALIA

(From Our Regular Correspondent)

June 26, 1946.

Medical Training in Queensland

Starting with the first year in 1947, a new medical curriculum will operate at the Queensland University. The course will be six years in duration, the academic part occupying five years and the final year being spent in attendance or residence at an approved hospital. The objective of the medical course will be the practice of general medicine and surgery. The essential object of medical education at the university stage is skill and reliability in general medical practice. Specialism will be carefully avoided. Students will be trained to use their faculties of judgment, intelligence and initiative. Much more consideration will be given to the health of the student himself, by reason of both its educational and its physical value. The student will be trained in citizenship in order to develop the relationship between the practitioner and the community. Before entering the medical course the student must have demonstrated his knowledge of English, physics, chemistry, mathematics and one language. In the first year much of the general physics and chemistry will be deleted. Physics will be restricted to a revision and unification of the premedical standard and the study of physical phenomena important to the understanding, investigation and control of living material. Chemistry similarly will revise and unify the matriculation standard and will provide the fundamentals of physical and organic chemistry necessary for the understanding of physiology. The first year will include general biology, comparative anatomy, general human anatomy, developmental anatomy and histology and medical zoology. The second year will cover regional, systematic and developmental anatomy, systematic physiology, integrative physiology and neurology. The third year will deal with clinical anatomy and physiology, general and special pathology, pharmacology, normal psychology, clinical methods, materia medica and pharmacy, bacteriology and hematology. The fourth year will cover systematic medicine and surgery, social medicine and obstetrics. In the fifth year the students will work in clinical groups and will also study and practice clinical anatomy and pathology, surgical pathology and social medicine. The special subjects will be allotted only two hours a week. Two weeks full time must be spent in residence at an obstetric hospital. In the sixth year ten weeks' residence will be undertaken in each of the surgical and medical wards of a general hospital, a woman's hospital and a children's hospital. Students should be initially selected on the grounds of character and physical standard as well as by examination. During the course one third of the marks should be allotted for work done during the year in practical work, seminars and quiz classes. More weight should be given for knowledge of principles and their application than for memorized facts. Manual ability should be considered in the assessment of qualifications.

Nutrition Survey in Australia

A nutritional survey reveals a widespread failure to meet the additional nutritional needs in pregnancy and nursing. Families having more than 3 children show a progressively lower intake of all nutrients per head than the average size family of 2 or 3 children. Compared with prewar there is an increased consumption of milk and dairy products, fruit and vegetables and, despite rationing, a higher average consumption of total meat. These are some findings of a survey of the nutrition of the Australian people conducted by the Nutrition Committee of the National Health and Medical Research Council of Australia. The survey was made during 1944 over a total of 2,730 households, comprising 15,235 persons. Every effort was made to ensure a representative sample, but only households containing 2 or more children were selected for survey. This proportion of children to adults was found to be higher than in the general population.

Although some improvement has taken place in regard to calcium intake, a low level of calcium intake was general throughout Australia. Consumption of milk was higher in the metropolitan than in the rural areas. As spending power decreased it was found that cereal consumption increased and milk and fruit consumption decreased. It was found that the pattern of the Australian diet is generally the same in all areas. People eat much the same kind of food in every part of the commonwealth. One of the effects of butter rationing was to reduce its consumption. Fats other than butter, however, increased. There was a surprisingly uniform consumption of meat and meat products in all areas, the range being between 4.3 and 4.9 pounds weekly per adult male.

The nutrient intakes were compared with the National Research Council of America's recommended allowances in 1941 but restricted to the degree that for nutrients other than calories and protein in the case of men and women 70 per cent of the National Research Council's amounts were allowed. Full values were taken for all groups up to the age of 20 years and expectant and nursing mothers.

Marriages

CARLETON ROBERT DEAN, East Lansing, Mich., to Miss Nancy Elizabeth Hood in Charlotte, N. C., June 15.

DAVID ROLLO HAWKINS, Springfield, Mass., to Miss Elizabeth Greenfield Wilson of Batavia, N. Y., June 8.

LLOYD THOMAS BELL, Culver City, Calif., to Miss June Lillian McElwain of Rochester, N. Y., June 15.

FREDERIC CROSBY BARTTER, Baguio, P. I., to Miss Jane Hazen Lillard of Cohasset, Mass., recently.

GEORGE A. RICKLES, Tacoma, Wash., to Miss Ruth Holland of New York in Seattle in March.

JOHN ALEXANDER DAVIDSON to Mrs. Mary Vannah Langlois both of Durham, N. C., May 18.

WILLIAM THOMAS FOLEY, New York, to Miss Barbara Helen Ball in Muncie, Ind., June 29.

JOHN MARVIN SMITH JR., San Antonio, Texas, to Miss Jane Jordan of Victoria, March 24.

Correspondence

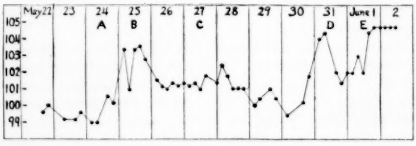
FATAL DELAYED ANAPHYLACTIC SHOCK AFTER PENICILLIN

To the Editor:—It might be interesting to add my experience of fatal delayed anaphylactic shock after penicillin therapy to the cases reported by Gordon in the June 29 issue of THE JOURNAL:

A middle aged man in previously good health and with no discoverable sign of other disease or of renal inadequacy underwent a subtotal gastrectomy for carcinoma the symptoms of which had been recognizably present for the previous few months. There was excellent immediate reaction from the operation. Sulfonamide drugs had not been insufflated in any part of the operative field as a local preventive measure, but the patient was immediately put on penicillin, receiving 30,000 units every four hours.

Convalescence was good up to the beginning of the fifth day. Thereafter the notes read as follows:

May 31. During the last three days the patient has always been distressed and there was a good deal of vomiting. Last night he seemed more distressed than usual, his pulse became poor and his general condition was not good. This morning the temperature has risen steeply to 104 F. There is a distinct erythematous (scarlatiniform) rash covering the sides of the trunk, the front of the abdomen and the sides and front of the thighs, but with an uninvolved area for a distance of about



Temperature in degrees fahrenheit. *A*, operation; *B*, penicillin 30,000 units every four hours; *C*, vomiting; *D*, scarlatiniform rash, penicillin stopped after total dosage of 720,000 units; sulfadiazine 2 Gm. every four hours, total 6 Gm.; *E*, urticarial rash; sulfadiazine stopped. Patient died June 2.

4 inches all around the wound. The general condition is fair, but the patient seems overwhelmed with some toxic reaction.

The penicillin was stopped, as it was assumed that it had caused the vomiting and rash. The family physician had himself gone through a similar experience and, judging by the latter, he had advised substituting sulfadiazine for the penicillin and this was done. Up to this time a total of 720,000 units of penicillin had been given.

June 1. The general condition of the patient has improved since yesterday and the temperature has dropped during the night to 102 F. but has again risen to 104.8 F. The original rash has spread and seems to be approaching the incision. In addition there is now an urticaria-like rash over the entire thorax and on the neck and face and down both arms. The general condition has deteriorated and the patient seems prostrated. The sulfadiazine, which had been given to a total of 6 Gm., was stopped.

June 2. The general condition of the patient continued to deteriorate and the rash increased in extent and severity. The patient died.

It seems difficult to integrate this postoperative course of events after operation (a stomach resection for carcinoma) except on the basis of a delayed anaphylactic reaction. The elements in favor of this assumption are (1) the unpredictableness of the reaction, (2) the character and intensity of the rash, (3) the high temperature and other overwhelming symptomatology (Selye's alarm reaction) and (4) the rapid ultimate fatality.

One other somewhat different experience with combined penicillin and sulfonamide chemotherapy besides this has compelled the view for myself that, when surgery is practiced in comparatively clean abdominal fields and without undue contamination of the operative field, chemotherapy had better not be employed unless absolutely required, and then with a certain amount of circumspection.

The fact that there was a clear area around the operative wound is extraordinary. I find it difficult to explain this phenomenon.

A. O. WILENSKY, M.D., New York.

DDT POISONING

To the Editor:—Suspecting that an error is creeping into the current literature, we have been questioning the acceptance of the report of "A Fatal Case of DDT Poisoning in a Child" by K. R. Hill and G. Robinson in the *British Medical Journal* (**2**:845 [Dec. 15] 1945). This report has been quoted by several other periodicals.

As the DDT taken by the child was dissolved in kerosene, it appears to us that the clinical symptoms and pathologic findings can in no way be distinguished from those following the sudden aspiration of kerosene alone, nor can the animal experiments be used as a comparison, since the solution was placed in the stomachs of the animals and not in the lungs. While DDT is shown to be toxic by this route, nevertheless the human case shows all the typical effects of kerosene poisoning without taking the DDT into account, and we believe that the fatality reported was due to kerosene, not to DDT.

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J. I. WARING, M.D.
Medical College of the
State of South Carolina,
Charleston, S. C.

Medical Examinations and Licensure

COMING EXAMINATIONS AND MEETINGS

BOARDS OF MEDICAL EXAMINERS
BOARDS OF EXAMINERS IN THE BASIC SCIENCES

Examinations of the boards of medical examiners and boards of examiners in the basic sciences were published in THE JOURNAL, August 10, page 1242.

NATIONAL BOARD OF MEDICAL EXAMINERS

NATIONAL BOARD OF MEDICAL EXAMINERS: *Part I.* Various centers, Sept. 30-Oct. 2. Final date for filing application is Sept. 1. *Part II.* Dec. 16-17. Sec., Mr. Everett S. Elwood, 225 S. 15th St., Philadelphia 2.

EXAMINING BOARDS IN SPECIALTIES

AMERICAN BOARD OF ANESTHESIOLOGY: *Written.* Various centers, Sept. 30. *Oral.* Boston, Oct. 9-14. Sec., Dr. Paul M. Wood, 745 Fifth Ave., New York 22.

AMERICAN BOARD OF DERMATOLOGY & SYPHILOLOGY: *Oral.* Cleveland, Dec. 5-7. Sec., Dr. George M. Lewis, 66 E. 66th St., New York 21.

AMERICAN BOARD OF NEUROLOGICAL SURGERY: *Oral.* New Haven, Oct. 8-9. Sec., Dr. P. C. Bucy, 912 S. Wood St., Chicago 12.

AMERICAN BOARD OF OBSTETRICS & GYNECOLOGY: *Written. All Groups. Part I.* Various centers, Feb. 7. Final date for filing application is Nov. 1. Sec., Dr. Paul Titus, 1015 Highland Bldg., Pittsburgh 6.

AMERICAN BOARD OF OPHTHALMOLOGY: *Oral. All Groups. Parts I and II.* New York, June 1947. Final date for filing application is Dec. 1. Chicago, October 1947. Final date for filing application is March 1. Sec., Dr. S. J. Beach, 56 Ivie Rd., Cape Cottage, Me.

AMERICAN BOARD OF ORTHOPAEDIC SURGERY: *Part II. Oral.* Chicago, January. Final date for filing application is Nov. 1. Sec., Dr. Guy A. Caldwell, 1136 W. Sixth St., Los Angeles 14.

AMERICAN BOARD OF OTOLARYNGOLOGY: *Oral.* Chicago, Oct. 8-12. Sec., Dr. D. M. Lierle, University Hospitals, Iowa City, Ia.

AMERICAN BOARD OF PSYCHIATRY & NEUROLOGY: New York, December. Final date for filing application is Sept. 30. Sec., Dr. Walter Freeman, 1028 Connecticut Ave. N.W., Washington, D. C.

AMERICAN BOARD OF RADIOLOGY: Chicago, Nov. 27 to Dec. 1. Final date for filing application is Sept. 1. Sec., Dr. B. R. Kirklin, Mayo Clinic, Rochester, Minn.

AMERICAN BOARD OF UROLOGY: *Oral.* Chicago, February 1947. Final date for filing application is Nov. 15. Sec., Dr. Gilbert J. Thomas, 1409 Willow St., Minneapolis 4.

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POSTGRADUATE CONTINUATION COURSES FOR VETERAN AND CIVILIAN PHYSICIANS

(Supplementary to Listing Published June 29, 1946, Vol. 131, pp. 777-789)

Institution	Title of Course	Schedule of Course	Registration Fee and/or Tuition
ALLERGY			
University of Illinois College of Medicine, 1853 W. Polk St., Chicago 12	Allergy	1 year, full time Jan. 1, 1947	Residents $300 Nonresidents 600
ANESTHESIOLOGY			
Stanford University School of Medicine, San Francisco	Anesthesiology	Sept. 2-6, 1946, 5 days, full time	50
CARDIOVASCULAR DISEASES			
American College of Physicians, 4200 Pine St., Philadelphia At: Boston	Cardiology	Nov. 4-9, 1946, 1 week	Members 20 Nonmembers 40
Stanford University School of Medicine, San Francisco	Cardiovascular Disease	Sept. 2-6, 1946, 5 days, part time	50
American College of Physicians, 4200 Pine St., Philadelphia At: Ann Arbor, Mich.	Cardiology	Dec. 2-7, 1946, 1 week	Members 20 Nonmembers 40
CHEST DISEASES			
Edward L. Trudeau Foundation, Saranac Lake, N. Y. At: Bellevue Hospital, New York	Trudeau School of Tuberculosis	Oct. 7, 1946, 2 weeks	50
ELECTROCARDIOGRAPHY			
University of Southern California School of Medicine, Los Angeles At: Los Angeles County Hospital	Electrocardiography	Nov. 5, 1946, 12 weeks, 1 evening a week	50 Regis. fee 5
HOSPITAL ADMINISTRATION			
Washington University School of Medicine, Division for Postgraduate Medical Education, St. Louis	Hospital Administration	Sept. 13, 1946-May 17, 1947	350
MEDICINE, GENERAL			
University of California Extension, Los Angeles 24	Clin. Lab. Aids to Med. Prac.	July 9, 1946, 7 weeks	Not stated
University of California Extension, Los Angeles 24 At: University of California Hospital	Postgraduate Course in Internal Medicine	Sept. 23-Dec. 9, 1946, 12 sessions, part time, evenings	60
University of Southern California School of Medicine, Los Angeles	Internal Medicine (Course 730)	Sept. 16, 1946, 12 weeks, full time	250 Regis. 5
	Internal Medicine (Course 730)	Jan. 6, 1947, 12 weeks, full time	250 Regis. 5
	9 Month Internal Medicine Course	Dec. 9, 1946, 9 months, full time	750 Regis. 15
At: Los Angeles County Hospital	Quantitative Methods in Medicine	Sept. 19, 1946, 12 weeks, 2 hours weekly, evenings	50 Regis. 5
Stanford University School of Medicine, San Francisco	Hypertension and Nephritis	Sept. 2-6, 1946, 5 days, part time, afternoons	50
At: Stanford University Hospital	Internal Medicine	Sept. 2-6, 1946, 5 days, part time, mornings	50
At: San Francisco Hospital	Internal Medicine	Sept. 2-6, 1946, 5 days, part time mornings	50
San Joaquin County Medical Society, Stockton, Calif.	Refresher Course	Oct., Nov., Dec. 1946, 7 sessions, 2-3 hours each	5
American College of Physicians, 4200 Pine St., Philadelphia	Tissue Growth and Tumors	Nov. 11-15, 1946, 1 week	Members 20 Nonmembers 40
At: St. Louis	Chemotherapy	Dec. 2-7, 1946, 1 week	Members 40 Nonmembers 80
NEUROLOGY AND PSYCHIATRY			
American College of Physicians, 4200 Pine St., Philadelphia At: Denver	Psychosomatic Medicine	Sept. 23-28, 1946, 1 week	Members 40 Nonmembers 80
Institute for Psychoanalysis, 43 East Ohio St., Chicago	Development of the Personality	Oct. 4, 11, 18, 25, 1946, 4 weeks, every Friday, part time, afternoons	15
	Development of the Personality	Nov. 1, 8, 15, 22, 1946, 4 weeks, every Friday, part time, afternoons	15
	Development of the Personality	Dec. 6, 13, 20, 1946, 3 weeks every Friday, part time, afternoons	15
At: Illinois Neuropsychiatric Institute	Psychosomatic Case Demonstrations	Oct. 1, 8, 15, 22, 29, 1946, 5 weeks every Tuesday, part time, afternoons	None
	Psychosomatic Case Demonstrations	Nov. 5, 12, 19, 26, 1946, 4 weeks, every Tuesday, part time, afternoons	None
	Psychosomatic Case Demonstrations	Dec. 3, 10, 17, 1946, 3 weeks, every Tuesday, part time, afternoons	None
At: Michael Reese Hospital	Psychopathologic Case Demon.	Fall 1946	Not stated
At: Cook County Psychopathic Hospital	Psychiatric Case Demonstrations	Sept. 30-Dec. 23, 1946, every Monday, part time, afternoons	10 Free to Phys., Social Workers and Nurses on active duty in Cook County Hospital
OBSTETRICS AND GYNECOLOGY			
Alabama State Health Department, Birmingham At: Slossfield Health Center	Institute for Negro Physicians	Jan. 1947, 3 days	15
University of Southern California School of Medicine, Los Angeles	Obstetrics and Gynecology	Oct. 14, 1946, 2 weeks, full time	100 Regis. 5
Stanford University School of Medicine, San Francisco	Obstetrics and Gynecology	Sept. 2-6, 1946, 5 days, part time, mornings	50
Washington University, Division for Postgraduate Medical Education, St. Louis 10	Newer Methods of Diagnosis and Therapy in Ob. and Gyn.	Sept. 9-21, 1946	100
OPHTHALMOLOGY			
Stanford University School of Medicine, San Francisco	*Ophthalmology	Sept. 2-6, 1946, 5 days, part time, afternoons	50
Ophthalmological Study Council, 520 Commonwealth Ave., Boston 15 At: St. Petersburg, Fla.	Intensive Course in Basic Subjects of Ophthalmology	Nov. 2, 1946-Jan. 15, 1947	Not stated
OTORHINOLARYNGOLOGY			
Stanford University School of Medicine, San Francisco	Otorhinolaryngology	Sept. 2-6, 1946, 5 days, part time, mornings	50
PEDIATRICS			
Stanford University School of Medicine, San Francisco	Pediatrics	Sept. 2-6, 1946, 5 days, part time, mornings	50
Tulane University School of Medicine, New Orleans	Pediatrics	Dec. 1946, 1 week	25
PROCTOLOGY			
Stanford University School of Medicine, San Francisco	Proctology	Sept. 2-6, 1946, 5 days, part time, afternoons	50
SURGERY			
Stanford University School of Medicine, San Francisco	Surgical Anatomy and Operative Technic	Sept. 2-6, 1946, 5 days, part time, afternoons	50 Plus material 20
At: Stanford University Hospital	Ward Rounds in Surgery	Sept. 2-6, 1946, 5 days, part time, mornings	50
At: San Francisco Hospital	Ward Rounds in Surgery	Sept. 2-6, 1946, 5 days, part time, mornings	50
Washington University School of Medicine, Division for Postgraduate Medical Education, St. Louis	Basic Science in Surgery and the Allied Specialties	Sept. 13, 1946-May 17, 1947	500

* For specialists.

Bureau of Investigation

STIPULATIONS

Agreements Between Federal Trade Commission and Promoters of Various Products

Following are abstracts of stipulations in which promoters of "patent medicines," medical devices or cosmetics have agreed, following action by the Federal Trade Commission, to discontinue certain misrepresentations in their advertising. These stipulations differ from the "Cease and Desist Orders" of the Commission in that such orders definitely direct the discontinuance of misrepresentations. The abstracts that follow are presented primarily to illustrate the effects of the provisions of the Wheeler-Lea Amendment to the Federal Trade Commission Act on the promotion of such products. These abstracts are given as examples, since space does not permit a review of all cases reported.

Cal-D-Pan.—U. S. A. Brands, Inc., New York, stipulated in April 1945 to cease representing that this is an "anti-gray-hair vitamin," the use of which will prevent or end gray hair, and that 88 per cent of the persons to whom calcium pantothenate (alleged to be the active ingredient in the product) was administered in tests had the original color restored to their hair.

Gra-No-Mor Hair Coloring and Tri-Pl-Oil Hair Tonic.—In June 1945 the Gra-No-Mor Company, Brookline, Mass., stipulated to cease representing, among other things, that Gra-No-Mor restores color to the hair and causes grayness to disappear like magic; to discontinue the term "Gra-No-Mor" as a trade name to imply that use of this product would put an end to gray hair; to cease representing that Tri-Pl-Oil Hair Tonic contains oils necessary to the life and beauty of the hair and scalp, helps to grow new hair and removes dandruff and dead hair; and to discontinue using the word "Tonic" as part of the name of this or any other product which does not possess tonic properties.

Grayvita.—This is reported to be a vitamin preparation containing calcium pantothenate. In May 1945 Spiegel, Inc., Chicago, stipulated that it would cease representing that the tablets will prevent or end gray hair or restore natural color to hair; or that restoration of the natural color of hair has been effective in 88 per cent or any other definitely stated percentage of those to whom calcium pantothenate was administered in tests.

Key-Mins.—In May 1945 the Keenan Laboratories, Frostproof, Fla., stipulated to discontinue the following misrepresentations, among others: That the product will build blood, bone or tissues, improve the general health, relieve or cure mineral deficiency diseases and disorders, or be of help in anemia, digestive and gallbladder disturbances, arthritis, convulsions, heart diseases, blood disorders, cancer, and many other things.

Lan-O-Kleen.—The West Disinfecting Company, Long Island City, N. Y., stipulated in June 1945 to cease representing, among other things, that the use of its preparation will prevent dermatitis or leave an oil film on the skin, or that the lanolin content remains on the skin.

Mayr's.—Berosol Products, Rockaway Beach, N. Y., stipulated in April 1945 to cease representing, among other things, that this product will prevent the absorption of toxic substances, relieve or correct indigestion or regulate the flow of bile, or is a stomach remedy.

Miracurl Expansion (Forming) Lotion and Miracurl Contraction (Fixing) Solution.—Turbanwav, Inc., New York, stipulated in May 1945 to cease representing that no harmful chemical is contained in these preparations used in the so-called Turbanwav Method of Permanent Hair Waving, or that the use of the method will improve the condition of the hair or cause the production of waves having all the characteristics of natural ones.

New Color Hair Dye, Juel Hair Dye or Jet Black Hair Dye.—These are different names for a preparation put out by the Juel Company, Chicago. In May 1945 the concern stipulated that it would discontinue any advertisement which did not reveal that its product is a hair dye and should be kept out of the eyes, mouth, ears and skin eruptions, is for external use only and should not be applied to the eyebrows or the eyelashes; provided, however, that it would be sufficient for such advertisement to state, "Caution: Use only as directed," if the label instructions carried a similar warning.

Normadex.—That this is an effective treatment for various disorders of the kidneys and bladder, diabetes, high blood pressure, obesity, rheumatism, arthritis, gastritis or colitis are misrepresentations which the Normax Products, Inc., Cleveland, stipulated in November 1944 to withdraw from their advertising. A label of Normadex which was circulating in 1941 bore the information (required by the Food, Drug and Cosmetic Act) that the active ingredients were extracts of cascara sagrada, mandrake, jalap, Alexandrian senna and epsom salt.

Nurse Parker's Compound, New Formula Pills and Relief Compound Pills.—These were various names for a single product sold by Frances Parker of Chicago, who stipulated in March 1945 to cease representing that it is an effective treatment for delayed menstruation.

Sebol, Shampoo DX-2, Hydrosul and Dioxynol.—In May 1945 George C. Dates & Associates, Philadelphia, stipulated to cease representing, among other things, that these products can prevent or remedy baldness, prevent loss or promote growth of hair; that old age or advancing years do not cause hair loss or baldness, or that the promoters, through diligent study and scientific experience, have developed approved treatments essentially different from those in common use for care of scalp and hair.

Top Lax.—The Marcellus Company, Boston, stipulated in April 1945 that it would discontinue any advertisements which did not reveal that the product should not be used when abdominal pains or other symptoms of appendicitis are present. It was provided, however, that such advertisements need contain only the statement, "Caution: Use only as directed," if the directions for use on the label contain a warning to the same effect.

Vitapan.—In December 1944 a concern variously known as the Vita Health Food Company, Nutritional Products Company, American Health Products Company and Eastern Health Food Stores Association, Washington, D. C., stipulated to cease representing that this product, by means of its calcium pantothenate content, would restore gray hair to its original color.

Wilson Hay Fever Disks and Wilson Inhalant.—The Wilson Hay Fever Disk Company, Minneapolis, stipulated in March 1945 to cease representing that its device or the supplementary medicine, singly or in combination, will relieve hay fever, sinusitis or asthma, remove pollen and dust from respired air to a degree that will relieve hay fever or its manifestations, or bring about a normal condition in any part of the respiratory tract which is inflamed because of pollen sensitivity.

Bureau of Legal Medicine and Legislation

MEDICOLEGAL ABSTRACTS

Charitable Hospitals: Statutory Tax Exemption Strictly Construed.—The plaintiffs sued the defendant hospital for taxes duly assessed and levied against the hospital's building, equipment and grounds during the years 1940 to 1943. From a judgment in favor of the plaintiff, the defendant appealed to the court of civil appeals of Texas, Texarkana.

The defendant was admittedly a charitable institution engaged in the operation of its hospital as a charitable enterprise. In so doing it employed C. L. Brookins as a laboratory technician to perform laboratory tests of patients in the hospital when requested by physicians. Mr. Brookins was permitted to do outside work as a laboratory technician, if this work did not interfere with his duties as an employee of the hospital, and was allowed to use the hospital laboratory and equipment in the discharge of his duties for the hospital as well as in his operation of the East Texas Medical Laboratory, of which he was the sole owner. He retained all income received from his service as a laboratory technician rendered to outside interests, paid no rent for any room or part of the hospital and had no personal command or direction over the hospital or its buildings outside the laboratory. During the period in question Brookins performed a large proportion of his tests at hospitals in adjacent towns, and his testimony showed that not more than 5 per cent of the tests he made in the name of the East Texas Medical Laboratory were performed in the defendant hospital's laboratory. He received from the defendant a monthly salary of $100 for his services as laboratory technician and an additional $2,800 or so from the operation of the East Texas Medical Laboratory.

To avail itself of the statutory tax exemption granted to charitable hospitals, the defendant had to show that its use of its property was exclusively charitable in nature. It was the defendant's contention that the term exclusively should be interpreted by the court to mean "substantially all" or "the greater part," and it argued that the relatively insignificant use of the hospital by Brookins should not destroy the exemption provided by law. Our courts, said the court of appeals, have followed the rule that "exemptions from taxation are never favored, and in the construction or interpretation of a law extending exemption from taxation to any citizen or class of property all doubts are resolved against the exemption." On the basis of this ruling the defendant's argument was overruled and the court held in effect that the defendant was not operating its hospital for exclusively charitable purposes. Accordingly the judgment in favor of the plaintiff was affirmed.—*Markham Hospital v. City of Longview, 191 S. W. (2d) 695 (Texas, 1945).*

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Current Medical Literature

AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1936 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied with stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

American Journal of Clinical Pathology, Baltimore

16:233-292 (April) 1946

Diagrammatic Representation of Rh Blood Types. A. S. Wiener.—p. 233.
*Acute Infectious Lymphocytosis. L. M. Meyer.—p. 244.
Diabetes and Other Toxic Effects Following Administration of Alloxan into Alimentary Canal of Rabbits. J. A. Ruben and K. Y. Yardumian. —p. 257.
*Large Scale Routine Examinations of Stool for Parasites: Practical Experience in a General Hospital in Zone of Interior. W. B. Hesselbrock, S. W. Lippincott and E. D. Palmer.—p. 264.
Diagnosis of Manson's Schistosomiasis by Biopsy of Rectal Tissue. W. A. Geib, M. F. Sher and G. Cheney.—p. 270.
Comparative Study of Kolmer Complement Fixation Test for Syphilis with Plasma and Serum. Katharine O. Patterson.—p. 277.
Management of Soldiers with Glycosuria in a Separation Center. M. G. Gichner and C. D. Gibson.—p. 279.
Spontaneous Regression of Metastatic Sarcoma: Case. R. H. Rosenman. —p. 281.

Acute Infectious Lymphocytosis.—Meyer reports 2 cases of acute infectious lymphocytosis in a white girl aged 2 years and in a Negro boy aged 8 years. The onset of symptoms was associated with coryza, pharyngitis, tonsillitis, otitis and elevated temperature. The girl patient had an enlarged palpable spleen and both patients had a moderate degree of lymphadenopathy. The organisms recovered from the nose and throat of the patients were the usual ones found in respiratory infections. The highest leukocyte count in the girl was 110,000, of which 90 per cent were lymphocytes, and the maximal leukocyte count in the boy was 70,000, of which 80 per cent were lymphocytes. The lymphocytes were slightly smaller than lymphocytes usually are; they had a dark purple chromatic material in the nucleus and practically no cytoplasm visible when stained. These overripe lymphocytes are to be considered as pathognomonic of the disease. Studies of serial smears of the bone marrow from both patients showed that the lymphocytosis persisted in the bone marrow for a longer period than was noted in the smears of the peripheral blood (three to seven weeks). A slight but persistent eosinophilia appeared to be a constant and early finding in the peripheral blood. The absence of anemia and thrombocytopenia distinguishes the condition from leukemia. There was also absence of the pathologic lymphocytes of infectious mononucleosis, and the heterophile agglutination test was negative.

Parasites in Stool.—Hesselbrock and his associates examined 14,250 stools from 2,464 patients in an army general hospital. The patients were divided into three groups to study the results of various technics used in the examination of the stools. In the first group of 1,972 patients an average of 3.4 specimens of stools per man was examined by a modified zinc sulfate technic. Two hundred and twenty infections (17.4 per cent) with pathogenic intestinal parasites were found among 1,261 men who had been evacuated from the Pacific area, 14.8 per cent of the men being infected. Forty-five infections (8.4 per cent) were found among 535 men who had been evacuated from the European and Mediterranean theaters, 6.2 per cent of the men being infected. Seventeen infections (9.7 per cent) were found among 176 men who had served in the Zone of the Interior only, 6.3 per cent of the men being infected. In the second group of 463 patients who had been evacuated from Leyte for schistosomiasis, an average of 20.4 specimens of stool per man was examined by direct smear, by sedimentation by gravity and by a modified zinc sulfate technic. One hundred and forty-six men were found to have a total of 178 infections with pathogenic intestinal parasites, excluding schistosomes. The percentage of patients infected was 31.5. In the third group of 29 patients also evacuated from Leyte, an average of 6.9 specimens of stool per man was studied by direct smear, zinc sulfate centrifugal flotation, sedimentation by gravity and sedimentation by centrifugalization. Excluding schistosomes, 20 patients were found to have 30 infections with intestinal parasites. The zinc sulfate centrifugal flotation method proved to be the most efficient of the technics used. Light hookworm infection and trichocephaliasis were the most common infections found in all groups.

American Journal of Medical Sciences, Philadelphia

211:513-640 (May) 1946

*Nutritional Macrocytic Anemia, Especially in Pregnancy: Response to Substance in Liver Other Than That Effective in Pernicious Anemia. Janet Watson and W. B. Castle.—p. 513.
Hookworm Infection in American Troops in Assam and Burma. A. M. Rogers and G. J. Dammin.—p. 531.
*Rutin: New Drug for Treatment of Increased Capillary Fragility. R. L. Shanno.—p. 539.
Acute Ethylene Glycol Poisoning: Clinicopathologic Report of 18 Fatal Cases. C. A. Pons and R. P. Custer.—p. 544.
Successful Combined Treatment of Penicillin Resistant Gonorrhea. A. G. Franks.—p. 553.
Meningococcus Endocarditis. G. M. Firestone.—p. 556.
Azotemia in Gastrointestinal Bleeding: Ingestion of Shed Blood in Humans. I. J. Greenblatt and T. D. Cohn.—p. 565.
Study of Effect of Bleeding and of Repeated Blood Donation on Serologic Tests for Syphilis. F. Boerner, S. Nemser and J. H. Stokes. —p. 571.
Hereditary Hemorrhagic Telangiectasia. E. B. Wells.—p. 577.
*Bronchopulmonary Geotrichosis. R. H. Kunstadter, R. C. Pendergrass and J. H. Schubert.—p. 583.
Penetration of Antibacterial Substances into Ischemic, Inflammatory Tissue with Consideration of Their Use in Shock of Bacterial Origin. H. E. Kruger, S. F. Quan and M. Prinzmetal.—p. 590.
Acute Pleurisy as Dehydration Phenomenon in Diabetic Precoma. L. P. Armanino and E. M. Ory.—p. 597.
Expectorant Action of Volatile Oils. E. M. Boyd and Gwendolyn L. Pearson.—p. 602.
Alterations in Capillary Permeability in Meningeal Irritations: Aid to Differential Diagnosis. K. Lange, D. Schwimmer and L. J. Boyd. —p. 611.
Sulfonamide Urolithiasis. J. V. Scudi.—p. 615.
Roentgenologic Changes Observed in Tropical Diseases. H. M. Weber. —p. 629.

Nutritional Macrocytic Anemia.—Three cases of nutritional macrocytic anemia, 2 of which occurred during pregnancy, responded to orally administered liver extract immediately after failing to respond to parenterally administered liver extract. A fourth case responded immediately to parenterally administered liver extract when the dose was increased ten fold. Watson and Castle think that at least two and possibly three types of nutritional deficiency are involved in nutritional macrocytic anemias. The first type responds to the parenteral administration of the usual amounts of the most refined liver extracts. This type includes Addison's pernicious anemia and many cases of sprue and macrocytic anemia of pregnancy. The second type responds only to orally administered crude liver extracts or to large amounts of certain relatively crude liver extracts given parenterally. This group includes certain instances of macrocytic anemia of the tropics, of anemia of pregnancy and of "refractory" anemias with megaloblastic bone marrow, as well as the cases presented here. As regards the third type it is possible that the basic deficiency in the 2 patients who responded to orally administered crude liver extract differs from that in the 2 patients who responded to large amounts of more refined liver extract. Since a distinction in response to refined and crude liver extracts was first reported by Lucy Wills and her associates, it is suggested that this effective principle in crude liver extracts and in autolyzed yeast be designated as the "Wills factor." It differs from the principle in liver which is effective in addisonian pernicious anemia and from the so-called extrinsic factor. Observations on the fourth case indicated that the Wills factor is not identical with various components of the vitamin B complex and accessory nutritional substances, including biotin, Lactobacillus casei factor and pyridoxal. In instances of macrocytic anemia refractory to parenterally administered liver extract, especially those associated with pregnancy, it may be important to test the efficacy of relatively crude liver extracts.

Rutin for Increased Capillary Fragility.—Rutin is a crystalline glucoside of quercetin derived from buckwheat leaves and blossoms, tobacco leaf, rue herb, tomato stems, white hydrangea, yellow pansies, the leaves of the common elderberry and many other flowers and leaves. Chemically it is a rhamnoglucoside of quercetin, thus being a derivative of flavone. Shanno shows the relationship of rutin to citrin, vitamin C and vitamin P, factors which regulate vascular permeability. Since it had been proved that rutin is nontoxic, Shanno used it in cases showing increased capillary fragility under a variety of circumstances. Twenty-four patients with hypertension were divided into two subgroups. All 13 of the first group, who had increased capillary fragility, were improved with rutin. The other 11 patients were treated with thiocyanate and rutin; 7 of these had normal fragility which was maintained by the prophylactic use of rutin given coincidentally with thiocyanate; 2 patients on thiocyanate alone developed an increase in the Gothlin index, which became normal following treatment by rutin. Two patients with pulmonary hemorrhage with increased capillary fragility were given rutin, with cessation of bleeding and a return to normal of the Gothlin index. Three patients with increased capillary fragility due to drug reactions were treated, with uncertain results. One patient with a small hemorrhage into the eighth nerve nucleus and 1 with complete heart block and retinal hemorrhages showed increased capillary fragility, which returned to normal following medication by rutin.

Bronchopulmonary Geotrichosis.—Kunstadter and his associates have isolated geotrichum repeatedly from the sputum of 3 patients. The history of 1 of these, who had symptoms and roentgenologic manifestations of chronic pulmonary disease, is presented in detail. The other 2 presented symptoms of chronic bronchitis and asthma without evidence of pulmonary infiltration. The clinical findings and the radiologic appearance of the lesions are not unlike those of myotic disease in general. The symptoms and clinical findings may readily be confused with tuberculosis and atypical pneumonitis. An accurate diagnosis is important for treatment. Geotrichum responds well to massive iodide therapy. The authors agree with Peterson, who stressed that a lesion having the appearance of tuberculosis in which no tubercle bacilli can be found should be studied to rule out a fungous infection. A white mucoid sputum containing grayish flakes and having a yeastlike odor should suggest a fungous disease. Geotrichum is grown on Sabouraud's medium. The colonies develop at room temperature in from twenty-four to forty-eight hours. They are small, white, fuzzy and adherent to the agar. Giant colonies develop in ten days and show a radiating appearance, with abundant coremia. The strain isolated repeatedly from the sputum of the patient liquefied both gelatin and litmus milk. Acid was formed from dextrose, maltose, sucrose and lactose. Microscopically the mycelium is septate and displays both arthrospores and chlamydospores.

Annals of Internal Medicine, Lancaster, Pa.

24:775-954 (May) 1946

*Clinical Analysis of Primary Atypical Pneumonia, with Discussion of Electrocardiographic Findings. J. F. Painton, A. M. Hicks and S. Hantman.—p. 775.
Management of Chronic Arthritis and Other Rheumatic Diseases Among Soldiers of United States Army. P. S. Hench and E. W. Boland.—p. 808.
Rheumatic Heart Disease in New Guinea, Including Cardiovascular Survey of 200 Native Papuans. H. D. Levine.—p. 826.
The Doctor as Witness. J. E. Tracy.—p. 837.
*Observations on Mass Chemoprophylaxis with Sulfadiazine. B. W. Billow and M. S. Albin.—p. 863.
Peptic Ulcer in Identical Twins. H. H. Riecker.—p. 878.
Diphtheria Carriers Treated with Penicillin. R. A. Kocher and W. J. Siemsen.—p. 883.
Hypoglycemia in Neuropsychiatry. M. Teitelbaum.—p. 887.
Blood Plasma Proteins in Patients with Heart Failure. G. R. Herrman.—p. 893.

Primary Atypical Pneumonia.—Painton and his associates evaluated 321 cases of atypical pneumonia. They found that the disease occurred throughout the year but reached its greatest incidence in the winter months. The onset was usually gradual, nonproductive cough and fever being the most prominent symptoms. Crackling rales over the involved area and some pharyngitis were present in two thirds of the cases. Inspiratory wheezes over the affected area furnished an important diagnostic sign early in the disease. The pulse and respiratory rates were only moderately elevated in most cases. A normal blood picture was usual, but leukocytosis did not preclude the diagnosis. Leukopenia and lymphocytosis were equally rare. The sedimentation rate in most of the cases was moderately elevated and was useful in determining the time of discharge. Most atypical processes originated in the hilus and extended into the dependent portion of the lungs. In nearly half of the series the cardiophrenic angles were the chief site of involvement. The left lung was more frequently involved. Treatment was chiefly symptomatic, but sulfonamides were indicated in selected cases. A small number of cases (3.7 per cent) exhibited changes in the RS-T segments, T waves or disturbances in conduction, suggestive of pericarditis and myocarditis. Most of these changes were reversible.

Prophylaxis with Sulfadiazine.—Billow and Albin report mass sulfadiazine prophylaxis instituted in 20,000 soldiers for a period of five weeks, when hospital admissions for respiratory diseases reached an alarmingly high rate with 23 per cent due to hemolytic streptococci. One Gm. of sulfadiazine was administered daily. During this chemoprophylaxis hospital admission for common respiratory diseases dropped by 33 per cent at the end of the first week. There were no cases of meningitis during prophylaxis, whereas there were 2 admissions within the following two weeks. Episodes of rheumatic fever were diminished. There was a drop in lobar pneumonias. Admissions for atypical pneumonia decreased by one third. Whether this was coincidental or related to the prophylaxis is not clear. Sulfadiazine prophylaxis did not appreciably influence the incidence of scarlet fever. Thirty of 63 patients who developed reactions were hospitalized; 5 of those were admitted with a tentative diagnosis of scarlet fever and 3 of German measles. It was only after negative throat cultures and observation of clinical progress that these diseases were eliminated. All hospitalized patients had fever of short duration and skin eruptions. Among the 33 ambulatory patients there were 22 with skin reaction, 5 with mild angioneurotic edema and 6 with gastrointestinal complaints. The authors caution against administration of sulfadiazine with a history of previous reactions. In military establishments sulfadiazine prophylaxis appears to be a potent means of reducing noneffective rates. Its application in schools, camps, asylums and the like is fully as promising.

Archives of Neurology and Psychiatry, Chicago

55:439-558 (May) 1946

Associated Movements in Oculomotor and Facial Muscles. R. Wartenberg.—p. 439.
*Toxic Psychoses Associated with Administration of Quinacrine. M. L. Sheppeck and L. E. Wexberg.—p. 489.
Nystagmoid Movements and Visual Perception: Their Interrelation in Monocular Diplopia. M. B. Bender and H. L. Teuber.—p. 511.
*Use of Curare in Oil in Treatment of Spasticity Following Injury of Spinal Cord. E. B. Schlesinger.—p. 530.

Toxic Psychoses Associated with Quinacrine Medication.—Sheppeck and Wexberg review 19 cases of toxic psychosis which developed following quinacrine treatment of malaria. Psychosis was observed in 1 of 250 cases treated with quinacrine. The clinical characteristics of these 19 cases are compared with those in 43 cases reported by other observers. The etiologic factor responsible for quinacrine psychosis is probably either an individual hypersensitivity to the drug or, in some cases, constitutional psychopathy. Toxic damage to the central nervous system caused by malaria seems to be a contributing factor. The pathogenesis of quinacrine psychosis is probably determined by hypersensitivity to the drug and its specific toxic effect on brain tissue previously sensitized by malarial infection. It should be recognized that certain persons are hypersensitive to the drug. The dosage should rarely exceed 2.8 Gm. in one course of treatment. Intravenous administration should be limited to cases in which results cannot be obtained otherwise. For treatment high doses of vitamin B preparations and forced intake of fluids are recommended. The prognosis is favorable. Quinacrine has proved so valuable in combating malaria that complications, even if they were somewhat more frequent than they actually are, would not justify its abandonment.

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Curare in Oil in Spasticity Following Injury of Spinal Cord.—According to Schlesinger the objection to the use of curare in aqueous solutions lies in its evanescent effect and side reactions such as blurred vision, diplopia, general weakness and dizziness. Various menstruums were tried in an attempt to overcome these handicaps. It was found that a suspension of curare in a mixture of peanut oil and white wax afforded good relaxation of muscle spasm of up to three days' duration in a group of patients with injuries of the spinal cord. Reduction of spasticity was not accompanied with the usual effects of curare, such as severe changes in accommodation and head drop. Slow absorption, with avoidance of unpleasant side effects, greatly enhances the therapeutic value of the drug. Curare in oil seemed to relieve spasticity following injury to the cord in 11 cases, of which 4 are cited in this paper. Drugs which afford relaxation of muscle spasm are valuable in permitting physical therapy. The effect of curare in oil on patients with some voluntary function masked by spasticity seemed more dramatic than the effect seen in paraplegic patients.

Archives of Surgery, Chicago

52:513-618 (May) 1946

Sideswipe Fractures. L. S. Highsmith and G. S. Phalen.—p. 513.
Anaphylaxis-like Reactions Produced by Ascaris Extracts: I. Changes in Histamine Content and Coagulability of Blood in Guinea Pigs and in Dogs. M. Rocha e Silva and R. Graña.—p. 523.
Acute Gastroduodenal Obstruction (Dilatation). W. C. Beck.—p. 538.
Repair of Ruptures Through Larger Tendons by Removable Staple Suture: Preliminary Report. H. L. McLaughlin.—p. 547.
Plans for Care of Peripheral Nerve Injuries Overseas. J. L. Thomson, W. P. Ritchie, L. A. French and D. W. Wrork.—p. 557.
Morphology and Variations of Duodenal Vasculature: Relationship to Problems of Leakage from Postgastrectomy Duodenal Stump, Bleeding Peptic Ulcer and Injury to Common Duct. A. L. Shapiro and G. L. Robillard.—p. 571.
Total Gastrectomy: Report of 6 Cases. R. B. Moreland.—p. 603.
Nonadherent Surgical Dressings. R. Bingham.—p. 610.

Bull. of the U. S. Army Med. Dept., Washington, D. C.

5:611-732 (June) 1946

Preoperative Care of Battle Casualties. P. S. Hill, W. A. Lapp and Kam Sung Tom.—p. 667.
Schistosomiasis Japonica—Laboratory Diagnosis. E. C. Nelson and M. Bayliss.—p. 673.
Field Garbage Incineration. W. W. Stiles and F. M. Foote.—p. 680.
Treatment of Fracture of Shaft of Femur. F. M. McKeever.—p. 690.
Nutrition Survey in Pacific Theater of Operations. W. B. Bean, R. E. Johnson, C. R. Henderson and L. M. Richardson.—p. 697.
Sodium Amytal in Treatment of Aphasia: Preliminary Report. L. Linn and M. H. Stein.—p. 705.
Early Syphilis of Submaxillary Glands. H. B. Jenkins.—p. 709.
Orthopedic Service During Campaign in Italy. B. E. Obletz.—p. 713.
Tour of Inspection of Packaging. R. K. Odenheimer.—p. 719.
*Unusual Typhoid Carrier. P. L. Shallenberger and E. R. Eselius. —p. 724.

Unusual Typhoid Carrier.—Shallenberger and Eselius report the history of a soldier, aged 18, who was hospitalized for acute olecranon bursitis. The patient stated that three years previously he had "stomach flu," for which he was confined to bed for two weeks with severe dysentery. Since then he has had intermittent episodes of abdominal cramping. The olecranon bursitis was first treated with hot applications and later with incision and drainage. From the purulent material Salmonella typhi was recovered. After twelve stool cultures, typhoid bacilli were recovered on two occasions from the stools. Four duodenal intubations were all negative for typhoid bacilli. This report reemphasizes that typhoid organisms in carriers may, on occasion, be recovered from other than gastrointestinal sources. Abscesses in apparently any location may contain intestinal pathogens. Their bacteriology should be studied with care to prevent overlooking a typhoid focus.

Cincinnati Journal of Medicine

27:279-344 (May) 1946

Treatment of Epilepsy. H. H. Merritt.—p. 279.
Variations of Primary Atypical Pneumonia. W. W. Hamburger.—p. 292.

27:345-424 (June) 1946

Clinical Experiences of Medical Consultant of Fifth Service Command. J. McGuire.—p. 345.
Review of Literature on Primary Atypical Pneumonia. Rose G. Ames. —p. 364.

Delaware State Medical Journal, Wilmington

18:67-92 (April) 1946

Use and Efficacy of Sulfonamides and Penicillin. A. G. Lueck.—p. 67.
Gastrojejunocolic Fistula: Case Report. H. S. Rafal.—p. 73.
Surgery in Treatment of Acute Massive Hemorrhage from Peptic Ulcer. D. R. Bryan.—p. 80.
Mycosis Fungoides: Report of Case, with Clinical and Postmortem Findings. J. F. Hynes and C. K. Wintrup.—p. 83.
Kaposi's Varicelliform Eruption. C. K. Wintrup.—p. 85.

Florida Medical Association Journal, Jacksonville

32:565-624 (May) 1946

Is Venereal Disease Control Program in Danger? R. F. Sondag.—p. 593.

32:625-708 (June) 1946

President's Address. J. R. Boling.—p. 649.
Proceedings Seventy-Second Annual Meeting of the Florida Medical Association Held at Jacksonville April 22, 23 and 24, 1946.—p. 653.

Iowa State Medical Society Journal, Des Moines

36:187-230 (May) 1946

The President's Address. R. D. Bernard.—p. 187.
Pollen Refuge at Home: Case Report. M. E. Barnes and R. Rooks. —p. 190.
Use of Penicillin in Diseases of Eye, Ear, Nose and Throat. C. C. Jones. —p. 193.
Is the Incidence of Gastric Cancer Overrated? F. W. Mulsow.—p. 194.

Journal of Bacteriology, Baltimore

51:411-564 (April) 1946. **Partial Index**

Additional Shigella Paradysenteriae Serotype. W. H. Ewing.—p. 433.
*Effect of Sulfonamides on Action of Penicillin. Gladys L. Hobby and M. H. Dawson.—p. 447.
Influence of Incubation Temperatures on Differential Tests of Coliform Bacteria. J. E. Fuller.—p. 457.
Microbiologic Aspects of Penicillin: IV. Production of Penicillin in Submerged Cultures of Penicillin Notatum. J. W. Foster, H. B. Woodruff and L. E. McDaniel.—p. 465.
Biologic Changes in Sulfonamide Resistant Mycobacterium Ranae. D. Yegian, V. Budd and G. Middlebrook.—p. 479.
External Otitis, with Additional Studies on Genus Pseudomonas. S. B. Salvin and M. L. Lewis.—p. 495.
Growth Inhibition of Strain H37 of Human Tubercle Bacillus by 4-N-Alkylresorcinols in Depth of Liquid, Synthetic, Nonprotein Culture Medium. W. F. Drea.—p. 507.
Glass Bacteriologic Filters Arranged for Positive Pressure. M. T. Bush. —p. 531.
Effect of Staphylococcus Aureus Extracts on Various Bacteria. L. G. Nutini Sr., T. A. Kelly and Margaret Ann McDowell.—p. 533.
Atypical Acid Fast Micro-Organisms: II. Desoxyribonucleic Acid Content. F. G. Petrik.—p. 539.
Influence of Heavy Water on Growth, Morphology and Fermentation Reactions of Eberthella Typhosa. H. L. Chance and W. C. Allen. —p. 547.
Survival for Fourteen Years of Agar Slant Cultures of Escherichia Coli-Mutabile Without Loss of Important Characters. H. J. Sears. —p. 553.

Effect of Sulfonamides on Action of Penicillin.—According to Hobby and Dawson, in the presence of penicillin in amounts so small as to produce little or no bacteriostatic action, sulfadiazine increases bacteriostasis, provided the organism is sulfadiazine sensitive and is present only in small numbers. In this instance the bacteriostatic effect is predominantly due to sulfadiazine. In the presence of penicillin in amounts sufficient to produce a bacteriostatic or bactericidal effect during the first few hours of incubation but insufficient to yield complete sterilization, sulfadiazine appears to increase bacteriostasis provided the number of organisms present at the end of the sulfadiazine lag period is low. Sensitivity of the organism to sulfadiazine enhances this effect. In the presence of larger amounts of penicillin the bactericidal action of penicillin is rapid during the first few hours of incubation. Complete sterilization may result before five to seven hours. If sterilization is not complete at the end of this time, the presence of sulfadiazine at times may prolong the lag period or even slightly decrease the bactericidal rate provided the organism is sensitive to sulfadiazine and is present in small numbers. The action of penicillin occurs predominantly at the time of cell division. A decrease in the rate of multiplication due to sulfadiazine therefore may decrease the rate at which penicillin acts. The combined use of sulfadiazine and penicillin may at times produce greater bacteriostasis than either alone.

Journal Industrial Hygiene & Toxicology, Baltimore

28:59-78 (May) 1946

Metabolites of 2,4,6-Trinitrotoluene (TNT) Excreted in Urine of Dogs. R. K. Snyder.—p. 59.
Summary of Twenty-Two Trinitrotoluene Fatalities in World War II. W. J. McConnell and R. H. Flinn.—p. 76.
Experimental Evaluation of Methionine in Therapy of Liver Injury from Carbon Tetrachloride. C. B. Shaffer, C. P. Carpenter and C. Moses.—p. 87.
*Eight Cases of Methyl Chloride Poisoning, with Three Deaths. W. D. McNally.—p. 94.
Evaluation of Urinary Lead Determinations: II. Approximate Upper Limit of Urinary Lead Excretion for Persons at Work. L. Levine and J. P. Fahy.—p. 98.
Dust Control in Hematite Mining: I. Effect of Wet Methods. B. D. Tebbens and I. R. Tabershaw.—p. 100.
Id.: II. Effect of Ventilation. B. D. Tebbens and I. R. Tabershaw. —p. 104.
Filter Paper Collection of Cadmium and Iron Fumes in Air. L. Silverman and C. Valenzuela.—p. 107.

Methyl Chloride Poisoning.—McNally describes 8 cases of methyl chloride poisoning which have occurred since the use of acrolein. The symptoms were severe headache, nausea, vomiting, abdominal pain, mental and psychomotor disturbances, rapid loss of equilibrium and an inability to walk, followed by loss of consciousness. There was a rise in temperature, an increase in pulse and respiratory rates and a lowering of the blood pressure. The blood picture was that of a primary anemia with a mild leukocytosis. The pupils were widely dilated and reacted sluggishly to light. Therapy consisted of oxygen inhalations, continuous intravenous injection of Hartman's solution and 5 per cent dextrose. Liver and iron were given intramuscularly. Alkalization of the patients is important. A retention catheter should be used when necessary, and the patient must have absolute bed rest. One of the patients died four days after admission to the hospital and 2 others, a man and his wife, were found dead. These 2 persons either had a defective sense of smell or were overcome so rapidly that they were unable to notice the tracer gas.

Surgery, Gynecology and Obstetrics, Chicago

82:623-756 (June) 1946

Observation on Radical Surgery for Lesions of Pancreas. A. O. Whipple. —p. 623.
*Primary Suture of Nerves. R. B. Zachary and W. Holmes.—p. 632.
*Clinical and Pathologic Study of Kidney in Patients with Thermal Burns. W. E. Goodpastor, S. M. Levenson, H. J. Tagnon and others.—p. 652.
New Method of Treatment for Severe Fractures of Os Calcis: Preliminary Report. K. H. Pridie.—p. 671.
Large Retroperitoneal Metastasis from So-Called Carcinoid of Small Intestine. J. A. Dickson, Edith M. Parkhill and P. C. Kiernan. —p. 675.
Intrathoracic Tumors of Sympathetic Nervous System. R. K. Hollingsworth.—p. 682.
Pilonidal Cyst: Analysis of 100 Consecutive Cases, Emphasizing Treatment by Radical Excision, Primary Closure and Penicillin Therapy. L. C. Larkin.—p. 694.
*Lateral Aberrant Thyroid. F. H. Lahey and B. J. Ficarra.—p. 705.
Urinary Incontinence Due to Bilateral Ectopic Ureters. L. F. Greene and D. O. Ferris.—p. 712.
Studies on Exophthalmos Produced by Thyrotropic Hormone: III. Further Study of Changes Induced in Fat by Thyrotropic Hormone (Tissue Reactions Associated with Exophthalmos). B. M. Dobyns. —p. 717.
Spontaneous Gastrointestinal Biliary Fistulas. N. F. Hicken and Q. B. Coray.—p. 723.
Ruptures of Malarial Spleens Unassociated with External Trauma. R. R. Best and J. F. Schmid.—p. 731.
Experimental Surgical Pulmonary Collapse. D. A. Wilson and H. Baker. —p. 735.
The Rh Factor: Serologic Background and Clinical Application. S. M. Bouton Jr.—p. 743.

Primary Suture of Nerves.—Zachary and Holmes review cases of primary nerve suture which came under observation at the peripheral nerve injury center at the Wingfield-Morris Hospital, Oxford, from 1940 to 1944. There were 55 primary nerve sutures. The results in these cases are compared with results of early secondary sutures. Contrary to the widely accepted view, the proportion of good results is higher in the early secondary sutures than in primary suture. Sepsis was not the chief adverse factor involved in primary suture. The microscopic examination of the site of primary suture in 16 cases indicated that the chief faults were poor technic, inadequate resection of the damaged nerve ends and excessive postoperative tension. There is a great deal to be gained by approximating the ends of the divided nerve to prevent retraction. When secondary suture is performed in a few weeks the length of nerve to be resected will probably be short; the suture can be performed with precision and without tension and the prospects of recovery will be good. If deliberate primary suture has been performed, the patient should be watched carefully. If progress appears unduly slow, further resection and resuture should be considered.

Study of Kidney in Thermal Burns.—Goodpastor and his associates studied 47 patients with burns in an attempt to establish a correlation between kidney function during life and morphologic kidney abnormalities at necropsy. Twenty patients had abnormal kidneys at necropsy and, except in 2 cases which showed pyelonephritis, the renal lesions consisted of tubular necrosis and the presence of pigment and cellular casts in the tubules. The remaining 27 patients had no significant morphologic renal changes. The pigment casts gave positive "hemoglobin stains." Clinically, kidney dysfunction was manifested by persistent azotemia, oliguria, decreased urinary nitrogen excretion and, rarely, edema. Renal dysfunction was probably the cause of the death of 2 patients. A close correlation was found among renal dysfunction, morphologic abnormalities of the kidneys and extent of deep burn, severity of shock and presence of hemoglobinuria.

Lateral Aberrant Thyroid.—Lahey and Ficarra state that the existence of tumors in lateral aberrant thyroid tissue is often not appreciated. Forty-seven instances of these tumors were encountered at the Lahey Clinic up to July 1, 1945. During this period 25,000 patients were treated for various types of goiter. Thus, one tumor of this type is seen in approximately every 500 goiter patients. These tumors may occur in patients of any age but usually in those under 40 years. They are more frequent in women than in men. The lesion must be distinguished from the simple neck tumors, branchial cysts, carotid body tumors and neurofibromas. Differentiation from tuberculosis, lymphosarcoma, Hodgkin's disease, inflammatory glands and metastatic carcinoma is of particular importance. Diagnosis is confirmed by biopsy. The pathologic picture is a papillary cystadenomatous structure. Radical neck dissection followed by high voltage irradiation is the most satisfactory treatment. The lesion is of low malignancy and is radiosensitive. The operative mortality in 47 cases was nil. Follow-up studies of 30 patients prior to 1939 cover five to fifteen years. Twenty-one of these patients showed no recurrence; 4 had recurrence, were reoperated on and have remained well. Four died of other causes. One patient died of recurrent malignant disease of lateral aberrant thyroid origin. The authors conclude that whenever a biopsy specimen is taken of a tumor from the lateral region of the neck, and the report is papilliferous cystadenoma or papillary adenocarcinoma, in all probability it is a lateral aberrant thyroid. Adequate surgical and radiation therapy will result in an ultimate favorable prognosis in the majority of cases.

Western J. Surg., Obst. & Gynecology, Portland, Ore.

54:177-216 (May) 1946

Intra-Abdominal Bands in Scarless Abdomen. E. E. Larson.—p. 177.
Appendicitis in Children: Review of 1,000 Cases Taken from Records of Children's Hospital, Los Angeles. W. J. Norris.—p. 183.
Uncomplicated Prolapse of Ovary as Cause of Acute Abdominal Pain. R. N. Rutherford.—p. 193.
*Intractable Epistaxis of Pregnancy. W. F. Goff.—p. 198.
Biliary Calculi with Unusual X-Ray Findings. S. R. Truman.—p. 200.
Fifty Years of Radiology: From Roentgen to Era of Atomic Power. R. S. Stone.—p. 201.

Intractable Epistaxis of Pregnancy.—Goff reports 2 cases of severe epistaxis. In both cases the usual conservative measures of control were inadequate. The decision to terminate pregnancy was based on the few cases in the literature which responded favorably. In the first of the 2 cases general anesthesia was employed for the interruption of pregnancy, and death followed. In the second patient local anesthesia was used and the outcome was favorable. Because of the dangers inherent in maintaining an open and free airway, local anesthesia is preferable to general anesthesia when termination of pregnancy is contemplated. Evidence is accumulating which indicates that a close relationship exists between the nose and the genital organs and that therefore treatment of severe epistaxis must be considered on an endocrine basis.

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FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

Annals of Rheumatic Disease, London

5:29-66 (Dec.) 1945

Anatomy and Physiology of Diarthrodial Joints. D. V. Davies.—p. 29.
Bacteriologic Investigation of Air During Epidemic of Hemolytic Streptococcal Throat Infection: Part I. C. A. Green, S. W. Challinor and J. P. Duguid.—p. 36.
*Ankylosing Spondylitis: Its Etiology and Pathology. C. W. Buckley. —p. 49.
Orthopedic Aspects of Rheumatoid Arthritis. J. Bastow.—p. 55.
*Return to Normal of X-Ray Changes in Rheumatoid Arthritis: Case Report. M. Lucchesi and O. Lucchesi.—p. 57.
Rheumatoid Arthritis: Review. G. D. Kersley.—p. 61.

Ankylosing Spondylitis.—Buckley discusses the etiology and pathology of ankylosing spondylitis in the light of Batson's work on the venous circulation from the prostatic plexus. The influence of phosphatase on bone resorption and redeposition is described, and the possibility of a toxin from the prostate influencing this process is considered. The bone changes in rheumatoid arthritis, spondylitis and rickets are compared, and the conclusion is drawn that ankylosing spondylitis is not a form of arthritis but a toxic osteopathy. The possible influence of sex hormones is discussed and found to be "not proven" but calling for further investigation. The importance of the dates of union of the epiphyses and the bearing of this on the disease is mentioned; the effect of the age at onset on the prognosis in the light of the pathologic condition is pointed out. Further investigation is urgently required in view of the great increase in the incidence of the disease, particularly in those cases which do not conform strictly to the classic pattern.

Return to Normal of X-Ray Changes in Rheumatoid Arthritis.—A woman aged 21 began treatment at the end of February 1942 and exhibited acceleration of the disease with aggravation of all the symptoms during the two following months. In April the first improvement began to appear, characterized by an increase of appetite and weight, progressive diminution of joint pains, less psychic depression, better disposition and freer movement of the fingers and wrists. In July the pains in the knees and ankles had disappeared, so that walking became possible. During the following months the symptoms improved and the pains in the temporomandibular and hand joints began to disappear, so that in December of the same year articular function and stability and normal weight had been regained. There was a complete disappearance of the pain. The hematologic and radiologic pictures became normal. The Lucchesis report the case because of the progressive retrogression and total disappearance of the organic articular lesions, which they believe to be unique. They have never seen mention of the return to normal of the radiologic features, either alone or concomitantly with the clinical cure of arthritis.

British Journal of Urology, London

18:1-52 (March) 1946

Transplantation into Bowel of Duplicated Ureters, with Report of 3 Cases. A. Jacobs.—p. 4.
Uses for Free Muscle Grafts in Urology. R. C. Begg.—p. 10.
Observations on Incidence of 665 Personal Cases of Urinary Lithiasis. H. P. Winsbury-White.—p. 13.
Operation for Varicocele. N. Makar.—p. 21.
Anterior Epididymis. S. H. Waddy.—p. 24.

Journal of Tropical Medicine and Hygiene, London

49:23-42 (April-May) 1946

*Intradermal Test in Malaria. J. G. Makari.—p. 23.
Tick-Borne Relapsing Fever in East Africa. C. E. Quin and E. S. Perkins.—p. 30.
Diamidines: Their Pharmacologic Actions and Their Therapeutic Uses in Tropical Diseases. R. St. A. Heathcote.—p. 33.

Intradermal Test in Malaria.—An antigen was obtained from the blood of a chicken heavily infected with Plasmodium gallinaceum (90 per cent of cells infected). Stock extract 0.1 cc. was injected intradermally into the forearm. Readings were taken at twenty-four hours. The diameter of redness was recorded in millimeters, and less than 5 mm. was regarded as negative. An area of redness from 5 to 9 mm. was recorded as 1 plus, from 10 to 14 as 2 plus and so on up. Of 71 proved active malaria cases 65 gave a positive test with the P. gallinaceum antigen. The same cases studied eighteen months before had only 48 cases with positive smears and 62 with positive cephalin tests. The test with the antigen from P. gallinaceum when done in 21 cases with a positive malarial history that goes beyond three years showed a positive reaction in 19 varying between 1 and 2 plus. The cephalin test done in the same cases showed only one weak positive reactor. In some of these cases the history of malaria goes as far back as twenty years. The test was negative in 63 of the 69 cases in which there was a negative malarial history. The mechanism underlying the test is thought to be based on hypersensitivity of malarial sensitized tissues to a common antigenic factor in P. gallinaceum of chickens.

Medical Journal of Australia, Sydney

1:573-608 (April 27) 1946

Blood Group Frequencies in Hollanders. J. J. Graydon, R. T. Simmons and E. F. Woods.—p. 576.
*Observations on Human Leprosy: Infection of Rats with Human Excretal Organism. J. W. Fielding.—p. 578.
Botany of Toowoomba and Environs and Its Relation to Clinical Allergy of Upper Respiratory Tract. C. R. Morton.—p. 585.

Leprosy.—Fielding found that patients with advanced leprosy and others with receding clinical manifestations pass organisms in the excreta. These organisms constitute a carrier problem and are capable of invading the skin of rats, producing by superinvasion light internal infection. Leprous blood, when hemolyzed and inoculated subcutaneously, gives rise to early primary lesions in rats; this suggests its use for the early diagnosis of human leprosy. Viability of the organisms appears to be destroyed by heating to 58 or 60 C. or by extended freezing. If stored dry at room temperature for periods up to two years, rat excreta organisms remain viable and invasive and produce early lesions on subcutaneous inoculation. The incubation period appears to depend on high viability of bacilli and on superinvasion, early neural leprosy being probably like glandular leprosy of rats—a product of early invasions of bacilli. Increased virulence is associated with intracellularity of organisms. This is suggestive of a closer affinity between the bacillus of Hansen and that of Stefansky.

New Zealand Medical Journal, Wellington

45:85-142 (April) 1946

*Hyperparathyroidism and Parathyroid Adenoma: Three New Zealand Cases. D. Whyte.—p. 88.
On Diarrhea. J. L. Adams.—p. 94.
Incidence of Tuberculosis Among Medical Students and Younger Graduates in New Zealand. L. W. Cox and J. C. D. Sutherland.—p. 102.
Blood Transfusions a Century Ago: Historical Note. R. O'Regan. —p. 107.
Pathogenesis and Clinical Value of Spontaneous Sensory Phenomena with Organic Disease of Brain. I. M. Allen.—p. 110.
Congenital Duodenal Stenosis: Report of Case. C. L. Tucker.—p. 118.
Prisoners of War in Japan. D. H. Symes and H. J. Hamlin.—p. 121.

Hyperparathyroidism and Parathyroid Adenoma.—Whyte reports 3 cases of parathyroid adenoma which presented a varying symptomatology. In the first case over a period of twelve years bony tumors of the jaws developed and eventually the skeletal changes of osteitis fibrosa cystica. The symptoms were relatively mild, and the tumor weighed 2 Gm. Diagnostic features were the x-ray bone changes and a high serum calcium. In case 2 the main symptoms were severe loss of weight and asthenia over a period of fifteen months. Skeletal changes were minor. The serum calcium and phosphorus values showed the typical reciprocal variation but were not constant, and the calcium balance was negative. Operation was done after further study and conservative treatment. The tumor weighed 4 Gm. In case 3 the first symptom was renal colic, and a calculous kidney was removed. Thereafter the symptoms over five years were related to the softening of the skeleton and nocturnal frequency. The skeletal changes were severe, culminating in a spontaneous fracture. Serum and calcium phosphorus values were both high, an anomalous finding. The tumor weighed 21 Gm. and was found at the second operation by a transsternal approach. Diagnosis rested on the history, the x-ray changes, the biopsy report of an osteoclastoma of the tibia and a high serum calcium. All three tumors were found distant from the thyroid, 2 lying behind the thyroid fascia and 1 in the anterior mediastinum. The diagnosis of hyperparathyroidism depended on awareness of the possibility of the disease.

Book Notices

Clinical Electrocardiography. By David Scherf, M.D., F.A.C.P., Associate Professor of Medicine, New York Medical College, Flower and Fifth Avenue Hospitals, New York, and Linn J. Boyd, M.D., F.A.C.P., Professor of Medicine, New York Medical College, Flower and Fifth Avenue Hospitals. Second edition. Fabrikold. Price, $8. Pp. 267, with 243 illustrations. Philadelphia, London & Montreal: J. B. Lippincott Company, 1946.

The concise and clear presentation of the cardiac arrhythmias, largely based on the work of the former Viennese school, remains the outstanding feature of this book on electrocardiography. By adding a discussion of the supernormal phase and of reciprocal rhythm the authors have made that part of the book more complete. It is to be regretted that the part dealing with contour changes and well established electrocardiographic patterns is less clear in its description and is inadequately illustrated. This is largely due to an inadequate demonstration of the utility of multiple chest leads. Instead of incorporating the chest lead findings in the individual chapters dealing with myocardial infarction, heart strain or acute cor pulmonale and correlating them with the limb leads according to their equal importance, the authors continue in this new edition to deal with the chest leads as a whole in a separate chapter, discussing only CR_2 and CR_4 and referring to the latter repeatedly as a lead from the cardiac apex, which is incorrect in cases with cardiac enlargement. The statement that "in clinical cardiology the value of the chest leads is limited chiefly to the diagnosis of coronary occlusion when typical changes fail to appear in the conventional leads" can be challenged on the basis of the valuable information obtainable by multiple chest leads in cases of left heart strain and their help in the differential diagnosis of myocardial infarction and massive pulmonary embolism.

The term coronary thrombosis is used frequently by the authors where it would be more appropriate to speak of myocardial infarction.

Exception should be taken with the scheme outlined by the authors for the use of quinidine to convert auricular fibrillation to sinus rhythm. With the newer knowledge regarding the rate of quinidine excretion it does not seem to be rational to give a dose of the drug only three times daily, and to do so on subsequent days without increasing the amount. Objections should also be raised to some statements made in the chapters on the arrhythmias. Thus, in the case of figure 186 a ratio of 7:1 A-V block is diagnosed ignoring the occurrence (between the conducted beats) of ventricular escapes which may have made the ventricles or the A-V junction refractory to a sinus impulse which otherwise would have been conducted.

The authors state that the most common form of sinoauricular block is that through a block of type II (without the Wenckebach phenomenon); however, they state that most cases of sinoauricular block are due to digitalis, which never produces a type II of A-V block. It seems unlikely that digitalis should act differently in cases of sinoauricular and A-V block.

The occurrence of interference dissociation in cases of 2:1 sinoauricular block is stressed, but no mention is made of its occurrence—by the same mechanism—in partial A-V block.

The bundle of Kent is discussed as a possible path for retrograde conduction of impulses from the ventricles to the auricles in the rare cases of complete A-V block with preserved retrograde conduction. It has been shown that in such cases retrograde conduction depends on the time relation of the idioventricular beat to the preceding P wave, thus indicating that the retrograde impulse and the blocked sinus impulse travel along an identical path, namely the bundle of His.

While taking exception to such statements of minor importance from a practical standpoint, it should be stressed that this book on electrocardiography is very consistent in its strong emphasis on correlation of electrocardiographic findings with the whole clinical picture. This is well exemplified in the presentation of the effects of digitalis and the evaluation of exercise tests. Such an approach should prove very sound in orienting the student of electrocardiographic interpretation.

Better Teaching Through Testing: A Practical Manual for the Physical Education Teacher. By M. Gladys Scott, Ph.D., Associate Professor of Physical Education, State University of Iowa, Iowa City, and Esther French, Ph.D., Professor of Physical Education, Head Department of Physical Education for Women, Illinois State Normal University, Normal, Ill. Cloth. Price, $2.50. Pp. 247, with 43 illustrations. New York: A. S. Barnes and Company, 1945.

This is an excellent elementary textbook for teachers using tests and measurements. It is a book for the practical teacher rather than the research worker. It is excellently constructed and outlines a wide variety of tests which can be used in high school physical education classes. There are nine chapters, eight of which deal with tests in sports and physical education and one chapter which deals with the motor type of tests. Tests are given for badminton, basketball, field hockey, soccer, softball, speed ball, tennis and volley ball. Also there are samples of physical fitness tests with emphasis on strength, agility, flexibility and endurance. There are rating scales and tests of general motor ability. The book covers legitimate use of tests and adds at the end of each chapter a good bibliography, modern and extremely well selected. Tests described are of the simplified type and can be administered by the average physical education teacher. Attention is given to the use of rating scales and procedures for administering tests. The authors make an extensive use of the T scores, and in this respect it would have been better to use the six standard deviation range scores, which are more readily understood by students because the scores distribute from 0 to 100 instead of from 20 to 80. The book is profuse with diagrams which are helpful to physical education teachers in conducting tests. Standards are included for a number of tests, but special attention may be called to the five item all round motor ability test for high school girls. This includes wall pass, basketball throw, broad jump, four second dash and obstacle run. Standards are given for both junior and senior high schools and also for college women. The book includes a wide variety of measurement devices and record keeping forms applied to rating scales and for measuring knowledge about sports. There is no knowledge test included for physical fitness. This is a book that all teachers ought to have who wish to do some practical work with tests and measurements.

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The Peckham Experiment: A Study in the Living Structure of Society. By Innes H. Pearse, M.D., and Lucy H. Crocker, B.Sc. A Sir Halley Stewart Trust Publication. Cloth. Price, $3.50. Pp. 333, with illustrations. New Haven: Yale University Press, 1945.

The Peckham experiment is described as a study of the living structure of society. It represents a study carried out under the Sir Halley Stewart Trust. The so-called Peckham experiment is the story of a community center in the Peckham district of London, which is south of the Thames not far from London Bridge. The community center endeavors to study so-called normal families and individuals as they go about their daily work and their daily recreation. The whole work is centered around a large community building of the modernistic type consisting of concrete platforms widely cantilevered and with walls made mostly of glass. There are a large bathing pool, a cafeteria and many large spaces available for public use by considerable numbers of people for games, assemblages, dancing and the like. Membership in the center is by families only. The entire family pays a nominal fee, and it is part of the bargain that they shall have what is called a health overhaul, which, to all intents and purposes, is a periodic health examination. Their reaction to the center and to the officers and staff of the center and to other members of the center community are carefully noted and the family is studied without much of the time being aware of the fact. In the health overhaul there is an effort made to discover the health status of each individual and its relationship to the life of the family as a whole. The authors make a distinction between disorder and disease. Disease, written dis-ease, is regarded by the authors as a state in which the individual is conscious that there is something wrong. Disorder, on the other hand, may be accompanied by subjective well-being. They find in their health overhaul a considerable number of persons neither in the clinical disease category nor in the category in which there is nothing wrong as determined by examination. This intermediary group is the group that is supposed to be afflicted with disorder,

though of a type which does not interfere with carrying out the daily job. Nevertheless this disorder may be the insidious beginning of a condition that will ultimately lead to disease. It is the contention of the authors that the medical profession becomes acquainted only with the dis-ease group and seldom or never discovers those in the disorder accompanied by well-being group. It is therefore their contention that the practice of medicine is one thing and the practice of health is something altogether different. It is their contention also that the practice of health cannot be approached through the individual but only through the family. They cite as an example one family in which the father had become exceedingly angry at his wife because they had a diabetic daughter. It was his belief that his wife had introduced diabetes into the family through her defective hereditary strain. An examination of the whole family disclosed that the mother was a perfectly normal individual with particular reference to prediabetic states, whereas the father was prediabetic with occasional glycosuria, and therefore if there was any defective heredity at all it was on the side of the father. Another child in the family other than the frankly diabetic daughter was also discovered to be in a prediabetic state. By adjusting the diet the prediabetic individuals were kept in normal sugar metabolism and the diabetic child, with the aid of insulin, was successfully treated. Moreover, peace and harmony was restored in the family. This is cited as a typical achievement of a health center through the practice of health as distinguished from the practice of medicine.

The American observer, accustomed to the independence of the family unit, can see in this a strong trend toward socialization and toward the increased dependence of the family on the community. More and more the families who are members of the center are encouraged to depend on the center for guidance with respect not only to their health but to their recreation, their social life and their personal and financial problems. This kind of community dependence, if carried to its logical extreme, would soon merge the family unit in the larger communal unit, and, although the first step seems to be in the direction of increasing family dependence, the ultimate steps and the final outcome of this movement would seem logically to place responsibility on the community rather than on the individual.

Science and Seizures: New Light on Epilepsy and Migraine. By William Gordon Lennox, M.D., ScD., Hon., Assistant Professor of Neurology, Harvard University Medical School, Boston. Second edition. Cloth. Price, $2. Pp. 258, with 10 illustrations. New York & London: Harper & Brothers, 1946.

This edition is essentially along lines similar to the first volume, which was reviewed in THE JOURNAL Sept. 6, 1941, page 901. The author attacks the problem first from the historical angle and then from the descriptive. He deals first with the need for enlightenment and controversies over terminology. He describes various types of seizures, beginning with the aura and dealing also with psychic seizures. He discusses frequency of the condition, portions of the brain affected, borderland conditions, threat to life and intellect, causes of seizures, making a diagnosis, encephalograms, the prevention of epilepsy and the problem of heredity and marriage. In dealing with treatment he divides it into several classifications, first preliminary problems, then psychologic-social factors, physical factors such as general health, the pharmacologic, or drug, factors and finally treatment during the seizure, care away from home, and a campaign against epilepsy.

Part II, relating to headaches, is considerably enlarged over the similar section in the first edition of the book. The author holds definitely that there is a close relationship between headache seizures, that is the migraine type of headache, and epilepsy. Although Dr. Lennox does not agree with his colleagues in all points, this is a useful book for patients, particularly because it is so cheerfully, practically and optimistically written and is of the utmost psychic value to the patient for that reason. It is unfortunate that the publishers departed from good taste in emphasizing on the cover the new drug tridione. Actually this is not yet ready for emphasis to lay readers. It is hardly available on the market. Although it offers great hope, it is only a small part of the attack on the epileptic problem. Aside from this minor departure from good taste, this is a useful second edition and should have a wide currency.

Corky The Killer: A Story of Syphilis. By Harry A. Wilmer, B.S., M.S. M.D. Introduction by Paul A. O'Leary, M.D., Head, Section on Dermatology and Syphilology, Mayo Clinic, Rochester, Minnesota, with forewords by Joseph Earle Moore, M.D., Associate Professor of Medicine, Johns Hopkins University, Baltimore, Maryland, and Kendall Emerson, M.D., Managing Director, National Tuberculosis Association, New York. Cloth. Price $1. Pp. 67, with illustrations by the author. New York: American Social Hygiene Association, 1945.

This book is a combination of fact, fantasy and illustration. The illustrations are largely, if not entirely, on the fantastic side. Corky the Killer is the spirochete of syphilis. The story is that of his invasion into the body and the results which come from that invasion. The book is a reversion to the abandoned form of health education in which we used to be treated to pageants of Carrie Carrot, Letty Lettuce and Annabelle Apple. In those dramas coffee, beer and tobacco were the dreadful villains, while milk was the shining knight in armor. Here we have Corky the villain and various fantastic representations of the processes of syphilitic infection in the body. On each left-hand page is the fantastic personification type of presentation at the top of the page and at the bottom its translation into scientific terms. On the right-hand page opposite is a cartoon type highly fantastic representation of the same matter that is covered in the text on the page opposite. The book was produced in consultation with some of the most experienced authorities in health education, who appear to like it. We believe that the time has passed when we must make these oblique approaches to health education. People who really want health education will take it in a straightforward manner. Those who do not want it cannot be beguiled by any such obvious efforts.

Atlas of Surgical Approaches to Bones and Joints. By Toufick Nicola, M.D., F.A.C.S., Professor of Orthopedics, New York Polyclinic Post Graduate School and Hospital, New York. With a foreward by Norman T. Kirk, Major General U. S. A., The Surgeon General. Cloth. Price, $5. Pp. 218, with 227 illustrations. New York: Macmillan Company, 1945.

This is a highly welcome book. Many surgeons have wished for a book of this type during the past ten or fifteen years. It contains a series of large line drawings illustrating the surgical approaches to bones and joints. It is easily read. The material is presented in a clearcut manner. The illustrations are not the zenith of artistry but they more than compensate for that by their great utility. Believing with the Chinese that "one picture is worth ten thousand words," the author presents a book made up entirely of drawings. This is a radical departure from the usual form of presenting a medical textbook, since it makes exclusive use of plates to illustrate the subject. Though specific operations will change from time to time to keep pace with advancing surgery, the procedures by which a surgeon reaches bones and joints will remain essentially the same. Surgeons will appreciate the systematic study of the anatomic approaches to bones and joints. Such knowledge will enable the surgeon to avoid damage to muscles, nerves and arteries. The illustrations, made by the author from original anatomic dissections and from twenty-five years of surgical experience on bones and joints, are presented in anatomic sequence from the skin incision to the bone or joint to be exposed. No attempt has been made to discuss surgical technic.

An Index of Differential Diagnosis of Main Symptoms. By Various Writers. Edited by Herbert French, C.V.O., C.B.E., M.D., Consulting Physician, Guy's Hospital, London. Assisted by Arthur H. Douthwaite, M.D., F.R.C.P. Sixth edition. Fabrikoid. Price, $17. Pp. 1,128, with 798 illustrations. Baltimore: William Wood & Company, 1945.

If one was condemned to practice medicine in an uncivilized land with only two books for a technical library, one would do well to choose this volume and its companion "Index of Treatment." Faced with a patient with some unusual symptoms or findings the causes of which are not well known, it would be a great help to turn to the appropriate article in this dictionary of diagnosis and there find the diseases to be thought of. The text is well and interestingly written, and there are few unnecessary words. There are 798 helpful illustrations, 231 of which are in color. The book was issued under great difficulties because of the war, and Dr. French is to be congratulated for having got it out at all. Again he has placed the medical profession in his debt.

Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES. THEY DO NOT, HOWEVER, REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY. ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED. EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS, BUT THESE WILL BE OMITTED ON REQUEST.

EPILEPSY AND MENOPAUSE

To the Editor:—**A woman aged 65, with a completely negative history, started having typical epileptic attacks some time after cessation of her menses thirteen years ago. The attacks occur about every four weeks, usually at night, and are not influenced by diphenylhydantoin sodium. No organic cause has been found. The patient is in excellent health otherwise. Have similar cases been observed elsewhere and what treatment is suggested?**

Robert M. Schmidt, M.D., New York.

ANSWER.—The onset of epileptiform seizures at about 52 years of age, in the presence of a completely negative past history (including infantile and family history), necessitates exclusion of brain tumor, hypoglycemia, blood dyscrasias, cardiovascular syndromes, cerebral degenerative diseases (including dementia paralytica) and similar disorders apt to produce convulsions (see Lennox in Tice's Practice of Medicine, vol. 10, chapter 12, p. 227).

If these conditions have been excluded, so-called "senile epilepsy" should be considered. This consists in the occurrence of epileptiform seizures due to small areas of cerebral softening and gliosis secondary to cerebral atherosclerosis. No type of treatment is entirely effective in these cases. A combination of diphenylhydantoin sodium 1½ grains (0.1 Gm.) and phenobarbital ¼ grain (15 mg.) at bedtime should be most effective.

The monthly occurrence of seizures following the climacteric suggests so-called climacteric epilepsy, which has been recognized by Kinnier-Wilson, Talbot and others. The onset of epileptiform seizures at the climacteric is quite rare. Periodic occurrence of seizures substituting for the menses is even more unusual, although cases have been observed. In 1, seizures occurred from childhood to puberty, disappeared during the menstrual life of the patient and recurred at monthly intervals after the climacteric. In this case endocrine assays revealed an unusually prolonged periodic menstrual activity on a subclinical level. Substitution and repressive endocrine therapy were both ineffective. Anticonvulsant therapy was helpful but not wholly successful. In another case seizures substituted for the menses immediately after an early but otherwise uneventful climacteric at 35 years of age. This patient responded well to diphenylhydantoin sodium and/or phenobarbital.

In a case like that described in the query an attempt should be made to determine any endocrinopathy, such as persistent menopause, and appropriate therapy applied. In the event that this is not successful, diphenylhydantoin sodium 1½ grains with phenobarbital ¼ grain may be found more effective than either alone. The complicating effect of cerebral atherosclerosis would render any type of treatment less effective.

POSSIBLE ACROCYANOSIS AND ATROPHIA CUTIS IDIOPATHICA

To the Editor:—**A white man aged about 23 was seen because of atrophy of the terminal phalanx of both index fingers without other findings. There was no history of trauma or frostbite. In July 1944 the patient received pentothal anesthesia for the removal of a pilonidal cyst. The operation was successful, but one week later he noticed numbness and then tenderness of the terminal phalanx of the left index finger. X-ray study in November 1945 showed almost total atrophy of the bone of the terminal phalanx. In September the index finger of the right hand presented similar clinical manifestation and recent x-rays showed atrophy of this bone also. Superficial examination at the present time reveals clubbing and some swelling of these two fingers, which are also slightly more moist and redder than the other fingers. There is no evidence of sclerodactylia, erythromelalgia or Raynaud's disease. Routine laboratory tests, including tests for syphilis, are negative. Blood calcium, phosphorus and phosphatase determinations are normal. At present the patient complains of slight tenderness in the terminal phalanx of the fifth finger of the right hand but x-ray findings of this finger are normal.**

Eugene De Angelis, M.D., Morgantown, W. Va.

ANSWER.—This case falls in the group of vasomotor trophic neuroses associated with disorders of the autonomic nervous system. It may be a case of acrocyanosis in association with atrophia cutis idiopathica (Bing and Haymaker's Text Book of Nervous Diseases, ed. 5, pages 669-684). Certainly the etiologic factors in this case are obscure.

DIAGNOSIS AND TREATMENT OF CONGENITAL SYPHILIS

To the Editor:—**What is the accepted treatment of a newborn baby with positive Wassermann, Mazzini and complement fixation tests? The mother was given the "rapid" treatment when about three months pregnant in one of the government hospitals. Subsequent tests at monthly intervals remained positive. No additional antisyphilitic treatment was given. Is the placental blood taken at time of delivery from the cord (the blood here used for report on the baby) usually positive in a case of this type?**

J. Lloyd Mims, M.D., Summerville, S. C.

ANSWER.—If the mother has a positive blood serologic test for syphilis at the time of delivery, the newborn infant may have a positive blood test also, even though not actually infected with this disease. This is particularly true if cord blood is used for the test, since in such instances even small amounts of syphilis reagin transferred from the maternal blood stream may give a positive test. Although it is usual in instances in which the mother is treated with intensive therapy for syphilis early in the pregnancy for her to acquire a negative blood test by the time of delivery, this is not always the case. In this instance, therefore, we cannot be certain that the response of the mother to therapy is not satisfactory. If either mother or infant shows clinical evidence of syphilis, treatment of both should be commenced immediately. If both seem normal to physical examination, the acceptable procedure would be as follows:

1. For the mother, a quantitative titered blood serologic test for syphilis and a physical inspection for evidence of relapsing lesions should be performed once a month as long as the blood test is positive. If the titer is low or falling, further observation is permissible without retreatment. If the titer is rising, then immediate treatment is indicated. If a quantitative titered test is not available, retreatment as for early syphilis should be given if the test is still definitely positive at the end of one year of observation.

2. Assuming that the infant is normal to physical examination and quantitative titered serologic procedure for syphilis is available, a blood test of the infant each two weeks as long as it is positive or until definite diagnosis is made is indicated. In the nonsyphilitic infant the titer will usually fall to low values (less than 4 to 8 units) within two or three weeks and will usually be negative by six or eight weeks (occasional cases are seen in which a low titer exists into the third month in the absence of syphilis). Infants so responding need not be treated for syphilis, because they are usually not infected with the disease. A final serologic test to rule out syphilis is indicated at the age of 4 to 6 months. If the titer persists at high level after four weeks of observation or increases, treatment of the infant may be commenced immediately.

In situations in which quantitative titered serologic tests are not available, it would probably be best to treat the infant if a strongly positive test was obtained beyond the sixth or eighth week of postnatal life.

A properly interpreted roentgenogram of the long bones of the infant, provided the procedure is available, is also helpful in this situation to reveal osteochondritis or periostitis when present. A small percentage of infected infants will show diagnostic roentgenographic signs at birth or in the immediate neonatal period. The procedure has its greatest diagnostic value at 6 to 8 weeks, when the percentage of syphilitic infants with positive roentgenographic signs approaches 90.

Suggested treatment for the infant, if infected, would be a total dosage of not less than 150,000 Oxford units of sodium penicillin per kilogram of body weight, given in one hundred and twenty divided doses intramuscularly, at three hour intervals, over a period of approximately fifteen days. This is a hospital procedure but is to be preferred over older ambulatory methods of treatment using alternating courses of eight weekly injections each of arsenical and bismuth preparations over a period of a year or more.

TREATMENT OF BRACHIAL PLEXUS BIRTH INJURY

To the Editor:—**What is the best treatment and the prognosis for an infant born with damage to the brachial plexus and a fracture of the clavicle due to obstetric trauma? After six weeks there are paralysis of the biceps and slight paralysis of the deltoid. The fracture of the clavicle is united.**

Samuel Morse, M.D., New York.

ANSWER.—The results of operation in cases of brachial plexus injuries in the newborn are questionable and generally unsatisfactory. What has been done in the case under discussion is the best treatment; i. e., waiting and observing. The fact that in six weeks there remains only paralysis of the biceps (musculocutaneous nerve) and part of the deltoid (circumflex nerve) would indicate that the injury was rather far removed from the roots of the plexus as they emerge from the spinal canal. The prognosis would seem to be good. The child should be closely watched to see that no deformities develop.

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